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ABSTRACT

This loose-leaf compendium includes three types of brief research summaries: "topical synthesis," "close-ups," and "snapshots." The single topical synthesis is entitled "School-Based Management" (Kathleen Cotton). Close-ups consist of brief definitions and essential research findings on the following topics: "Developing Empathy in Children and Youth" and "Nongraded Primary Education" (Kathleen Cotton). Four snapshots describe effective practices currently in place at various school districts throughout the country: "Building Positive Student Self-Concept" (Kathleen Cotton); "Achieving Success in Mathematics Through Innovative Programming" (Al Fitzpatrick); "Success for At-Risk Students Through Computer-Assisted Instruction" (Kathleen Cotton); and "Restructuring in a Multiethnic Environment" (Barbara K. Hernandez). Annotated bibliographies are appended to the topical synthesis and close-ups. (MLF)

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Topical Synthesis #6

School-Based Management

Kathleen Cotton

> The ultimate power to change is—and has always been—in the heads, hands, and hearts of the educators who work in the schools.
>
> —Sirotnik and Clark, 1988

Introduction

The history of American public education is characterized by periodic alternations between centralization and decentralization of power and authority (Cuban 1990; Darling-Hammond 1988; Lindelow and Heynderickx 1989; and Mojkowski and Fleming 1988). In times of greater centralized authority, large administrative structures, such as states, school districts, and school boards, maintain control over decisions regarding educational policy, budget, and operations. When the pendulum swings toward decentralization, much of this control shifts to smaller administrative units—smaller school boards, for example, and, more recently, individual schools.

During the past several years, the educational system in the United States has been evolving from largely centralized structures to more decentralized ones; and although the main expression of this trend goes by many different names, it is often called *school-based management*.

To its proponents, however, contemporary school-based management is considerably more than a new name for an old and recurring phenomenon. They argue that, unlike previous approaches to decentralizing education, school-based management invokes fundamental changes. As described by White (1989):

> Previous attempts to decentralize were aimed at shifting authority from a large, central board of education to smaller, local boards...replacing one form of bureaucracy with another. Past reforms avoided a transfer of power to the school site....SBM is different....it changes the entire system of district and school organization and restructures most roles in the district (p. 2).

A great many school-based management programs have been launched and are currently in operation in districts around the country, and new ones continue to be implemented. Associated with these developments is the appearance, during recent years, of a great many articles on school-based management in both technical and popular educational publications. This proliferation of programs and accompanying literature raises provocative questions about the concept and

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practice of school-based management—questions such as:

- What are the terms used to denote the school-based management concept?
- How is school-based management defined?
- What kinds of variation does one see among school-based management efforts?
- What is the history of and rationale for implementing this type of organization?
- How do the roles of board, central office, and school personnel change under school-based management?
- What obstacles to success are commonly encountered during attempts to implement and operate school-based management?
- What attitudes toward school-based management are held by those who are involved in school-based management efforts?
- Does school-based management lead to improved student performance or other desirable schooling attributes?
- Do the findings about school-based management lead to any recommendations for those considering implementation of this approach? If so, what are they?

The present review represents an attempt to answer these questions, drawing upon findings from recent research and other educational literature.

Sixty-nine documents—books, monographs, journal articles, conference papers, etc.—were reviewed in preparation for this report. Of these, 42 provide findings from research on the nature and outcomes of school-based management efforts and are cited in the Key References. The General References section cites another 27 documents—opinion papers, project descriptions, theoretical essays, and other writings of interest.

Terms and Definitions

To designate the kind of arrangement whereby increased authority moves from the district central office and school board to the individual school, the term *school-based management* has been and will continue to be used in this review. It is important to point out, however, that many other terms are also commonly used to specify such an arrangement. In making this point, Arterbury and Hord (1991) identify:

> such terms as decentralization, restructuring, site-based management, school-based management, participatory decision-making, school-based autonomy—to name a few (p. 2).

To name a few more, educational writers also designate the school-based management concept by the terms decentralized management, shared decision making, school empowerment, shared governance, decentralized authority, school-site autonomy, school-based decision making, school-site management, responsible autonomy, the autonomous school concept, administrative decentralization, and school-based governance (Ceperley 1991; Cistone, Fernandez, and Tornillo 1989; Johnston and Germinario 1985; and Lewis 1989).

This plethora of terms can produce confusion until one realizes that they all point in the same direction and that:

> the name is not as important as the shifts in authority that are taking place....No matter what the term...the school takes center stage in today's education reform scene (Lewis 1989, pp. 173-174).

Turning to the matter of definitions, one again encounters considerable variation: dozens of definitions for the school-based management concept are offered in the literature on this topic. These definitional differences are understandable, reflecting as they do the real variations in structure and operations found in different school-based management programs. Many writers have remarked, however, on the difficulties these disparities pose to those seeking to understand, evaluate, or compare school-based management efforts.

Commenting on the profusion of terms and definitions, Kolsti (1991) writes:

> School districts, scholars, and legislators repeat these various terms, but few state clearly what they mean or what they expect—how their use of these terms may differ from that intended by previous literature (p. 1).

Lindquist (1989) concurs, noting that:

> Variations of the SBM concept have emerged [and] the result seems to be confusion and misunderstanding concerning these vague and sometimes conflicting definitions (p. 404).

"A generic term for diverse activities," and "an ambiguous concept that defies definition," write Malen, Ogawa, and Kranz of school-based management (1990b, p. 298-299), further underscoring the lack of a specific meaning attached to this concept.

Researchers call attention to the many combinations of program features observable in different school-based management programs. As White (1989) puts it:

> ...there are numerous variations within districts and schools regarding the levels of authority, the actors involved, and the areas of control (p. 1).

For example:

- **Increased autonomy**—the latitude to function independently to a considerable degree—may or may not accompany the increase in authority at the school site.

- **Increased school-site accountability** is likewise a feature of some school-based management efforts but not others.

- The **power to establish policy** may or may not accompany the increase in the school's power to make other kinds of decisions.

- **Decision-making domains** differ enormously among different school-based management arrangements. Districts and boards may extend decision-making authority to the school in the major areas of budget and/or staffing and/or curriculum, as well as other domains.

- The **extent of decision-making authority within domains** also differs. For example, two districts implementing school-based management structures may both allow their schools to make decisions in the area of curriculum, but one may permit substantive decisions to be made and implemented, while the other allows only relatively trivial ones.

- The **distribution of authority at school sites** shows considerable variation as well. In some school-based management efforts, virtually all the increased decision-making authority extended to the site by the district remains in the hands of the principal. In others, teachers—but not other stakeholders—join the principal in making decisions. In most cases, however, decision-making authority is delegated to councils which might be made up of noncertified school staff and/or parents and/or community members and/or students, as well as the principal and the teachers.

- Another difference across sites is the **degree of real power held by the councils**. That is, the presence of a broad-based decision-making body representing all major stakeholder groups does not necessarily guarantee that the interests of all groups are truly represented. Some principals assemble such groups and then either occupy their time with petty matters or retain veto power over their decisions.

  Council members themselves sometimes contribute to excessive retention of power by the principal (or by the principal plus the teachers). Uncertainty about the extent of their authority or sheer unfamiliarity with assuming control over decision-making processes sometimes keeps councils from exercising as much authority as they have been delegated.

There are other variations as well, but this overview should serve to account for some of the confusion about what school-based management really means and the contradictory findings about the results it produces.

Given all this, what common denominators, if any, can be identified across the different definitions of school-based management?

For all their areas of disagreement, those who have generated definitions and descriptions do seem to concur with one another that school-based management:

- Is a form of district organization
- Alters the governance of education
- Represents a shift of authority toward decentralization
- Identifies the school as the primary unit of educational change
- Moves increased decision-making power to the local school site.

History and Rationale

To set a context for examining the relationship between school-based management approaches and other schooling variables, the following is a brief review of the centralization-decentralization cycle in U. S. educational history and the arguments for school-based management which characterize the current decentralization movement.

Larry Cuban, in his 1990 article on the cyclical nature of educational reform efforts, points out that school systems at the turn of the century were, for the most part, small and locally operated. Unfortunately, these provincial structures spawned considerable favoritism, nepotism, and corruption, leading reformers to call for consolidation of small districts into larger, centrally controlled boards.

This trend continued until the 1960s, at which time civil rights activists and others called for educational decentralization, so that local schools could be more responsive to the needs of their communities. Though not a nationwide phenomenon, considerable decentralization did occur in response to these pressures.

The mid-1970s and early 1980s saw a large-scale effort to bring about educational improvements through federal and state legislation—another swing toward centralized, top-down organization. This desire to stimulate reform and betterment through increasingly centralized, bureaucratic arrangements was well-intentioned enough. Like centralized arrangements generally, it was "intended to foster equal and uniform treatment of clients, standardization of products or services, and to prevent arbitrary or capricious decision making" (Darling-Hammond 1988, p. 11).

The problem, as is now widely recognized, is that highly centralized educational systems simply do not engender the desired outcomes. For one thing, they tend—like bureaucracies generally—to be impersonal and maddeningly slow moving. English's 1989 comments are typical of observations made about these drawbacks:

> Highly centralized systems are easily clogged with trivia. The result is inertia, pessimism, inefficiency, cynicism, and long delays for decisions of any kind on the smallest of matters. *School-based management is an excellent antidote to bureaucracy* (p. 2).

An equally significant concern is the repeated failure of centralized structures to inspire in school personnel the prerequisite attitudes and behaviors for bringing about educational improvements. Mojkowski and Fleming (1988) echo the findings of many other researchers and writers, noting that:

> ...a school improvement impetus and authority emanating from outside the school does not produce the responsibility and commitment necessary to sustain consequential improvement (p. 2).

The contemporary rationale for decentralized schooling—and particularly school-based management—has been developed partly in recognition of these problems and partly in response to research findings about more promising arrangements for improving education. The following assertions, which are commonly offered as the rationale for implementing school-based management, are drawn from the work of Amundson (1988); Burns and Howes (1988); David and Peterson (1984); English (1989); Levine and Eubanks (1989); Lindelow and Heynderickx (1989); Malen, Ogawa, and Kranz (1990a,b); Marburger (1985); Mojkowski and Fleming (1988); Peterson (1991); and White (1989).

- The school is the primary unit of change.
- Those who work directly with students have the most informed and credible opinions as to what educational arrangements will be most beneficial to those students.
- Significant and lasting improvement takes considerable time, and local schools are in the best position to sustain improvement efforts over time.
- The school principal is a key figure in school improvement.
- Significant change is brought about by staff and community participation in project planning and implementation.
- School-based management supports the professionalization of the teaching profession and vice versa, which can lead to more desirable schooling outcomes.
- School-based management structures keep the focus of schooling where it belongs—on achievement and other student outcomes.
- Alignment between budgets and instructional priorities improves under school-based management.

Role Changes Under School-Based Management

What happens when a school system elects to implement school-based management in some or all of its schools? According to the growing body of implementation research, the major impact is that the roles of all educational stakeholders—superintendents, other central office personnel, board members, principals, teachers, other school staff, and often parents, community members and students—are profoundly affected. Indeed, as Mutchler (1990) reports following an extensive school-based management survey:

> ...school-based management and shared decision making strategies directly challenge and seek to change the complex and well-entrenched patterns of institutional and individual behavior that...have remained untouched by top-down reforms (p. 4).

Those studying and commenting on these role changes include Amundson (1988); Arterbury and Hord (1991); Caldwell and Wood (1988); Ceperley (1991); Clune and White (1988); Conley (1990); Duttweiler (1989); Harrison, Killion, and Mitchell (1989); Hord (1992); Kolsti (1991); Lewis (1989); Malen, Ogawa, and Kranz (1990a,b); Marburger (1985); and Mutchler (1990). Their findings are as follows.

The district. "It is virtually impossible," notes Ceperley in her 1991 review and recommendations article, "to change significantly the role of school-level personnel without changing the traditional district administrative roles" (p. 7). Many writers have presented specific findings about these changes.

- **Superintendents.** "Experience in districts that have tried school-based management has shown that strong support from the superintendent is absolutely necessary for its proper implementation," writes Duttweiler (1989, p. 3), and virtually all writers on the subject of school-based management concur with this conclusion.
  - — Superintendents communicate to the community what school-based management is and why it is desirable in order to foster shared understanding and support.
  - — When school-based management begins to replace centralized administration, the superintendent's role changes from deliverer of top-down mandates to team member who encourages bottom-up change.
  - — Instead of pushing for as much standardization as possible, the superintendent's new role calls for supporting the differences and uniquenesses among different schools' approaches to change and improvement.
  - — Direct support to principals under SBM includes: (1) increased accessibility, (2) mutual development of growth plans with and for principals, (3) allocation of resources for planning and training at the school level, (4) arranging for training and develop-

ment activities based on jointly identified needs, and (5) assessing progress and providing follow-up assistance as needed.

- **Central office staff**. The role of these personnel shifts from a primary focus on giving directives and monitoring compliance to serving as resources for and facilitators of school-level change efforts.

  Functions typically include: (1) facilitating the development of student and staff performance standards, (2) offering technical assistance to the schools, (3) locating and providing resources materials, (4) establishing funding formulas, and (5) carrying out systemwide planning, monitoring, and evaluation.

The school. Under school-based management—and particularly in those settings where school-based management is accompanied by broad-based decision making—the roles of all school personnel undergo significant changes.

- **Principals**. Under SBM, it is the role of the principal that is subject to the greatest degree of change:

  — This change is sometimes expressed as reconceptualizing the principal's role from that of "boss" to that of "chief executive officer."

  — Instead of enforcing policies made elsewhere, which inevitably sets him/her apart from the staff, the principal works collegially with staff, sharing authority with them.

  — The principal typically moves closer to the educational process, serving as an instructional manager.

  — The principal moves higher in the district chain of command, because of the increased authority and accountability that shifts to the school.

- **Assistant principals and department heads**. The role of these people evolves toward serving as advocates with principals on behalf of teachers.

- **Teachers**. Teachers have often been isolated from involvement in significant decision making and from frequent and meaningful contact with one another. SBM arrangements tend to increase their involvement in these areas, often to a significant degree.

  As previously noted, the decision-making domains in which teachers are invited to become involved and the degree of real power they have to make decisions differ across SBM sites. Even so, a transition to SBM typically means that teachers' involvement in decision making will broaden considerably.

- **Students**. Students have traditionally been isolated from operational and policy decisions. Under SBM, students—particularly older ones—often have influence in these areas by giving advice and input.

Parents and community members. Parents and community representatives have generally been relatively uninformed and underutilized regarding decisions and operations. Many SBM structures not only make use of increased parent/community input, but also provide training to help them become more capable participants in the school's planning and decision-making efforts.

The school board. Board members continue to provide general direction for the district by establishing goals and policy statements, allocating resources, and monitoring progress. In particular, the board's clear message of support for school-based management lends credibility and fosters positive community attitudes toward SBM projects. The board's role does not change as dramatically as that of some stakeholders, but its support remains vital.

As might be expected, role changes as numerous and profound as those outlined above are not likely to happen effortlessly or painlessly. School-based management problems related to changes in peoples' roles are commonplace; these are detailed in the following section, along with other difficulties encountered in implementing and operating SBM programs.

Obstacles to Success

Much of the literature on school-based management is concerned with the problems districts and schools have experienced with it. Some of these are implementation problems, some arise in connection with operating SBM structures, and still others have to do with the failure of many SBM arrangements to bring about the results desired by school and district personnel and other stakeholders.

Considerable analytical effort has gone into identifying and describing the obstacles to success with school-based management, and findings appear in the work of Amundson (1988); Ceperley (1991); Cistone (1989); Clune and White (1988); Gomez (1989); Henderson and Marburger (1990); Jenni (1991); Levine and Eubanks (1989); Lindquist (1989); Malen, Ogawa, and Kranz (1990a,b); Marburger (1985); Mutchler (1989, 1990); Valesky, Forsythe, and Hall (1992); and White (1989).

Time. "The greatest source of trouble is time," says Ceperley (1991, p. 8). The activities associated with school-based management "require school staff to devote additional hours each day on top of an already hectic schedule." The stress produced by these extra time demands has led to pessimism and burnout in some settings, particularly on the part of teachers.

Unrealistic expectations. Many schools piloting school-based management undertake too many projects and procedural changes during their first year or two of operation. The research on school-based management makes abundantly clear that full institutionalization of a school-based management process takes a long time—as long as five years or more.

Insufficient support for site councils. Site councils, which are the bodies concerned with planning and decision making in most SBM structures, are often given extensive responsibilities, but lack the qualifications to carry out those responsibilities. Typical problems include:

- **Lack of knowledge of school operations**. Members of newly formed councils—teachers, noncertified staff, and perhaps parents and students—generally possess little knowledge of school budgets, facilities, personnel, policy issues and other matters about which they are expected to give input and/or make decisions.

- **Lack of group process skills**. Council members are likewise often deficient in the skills of group decision making, conflict resolution, problem solving, and others required for effective group work.

- **Lack of clarity about their role**. Is this council a decision-making body or an advisory one? Assuming it has decision-making authority, can it make decisions about all aspects of the school...or only about some of them? What are the mandates and other "givens" that will influence the council's work? Surprisingly often, site councils are asked to function without answers to these very basic questions.

Incongruence between decisions desired and decisions allowed. Not infrequently, teachers find themselves becoming disenchanted with school-based management. One commonly occurring reason is that the kinds of decisions they are allowed to make or influence are not the ones about which they care and feel knowledgeable.

Research has clearly established that teachers' desire to participate in decision making centers on the school's technical core—its curriculum and instructional program. Unfortunately, districts are often unwilling to delegate real decision-making authority to schools in these areas.

This may or may not sit well with principals, but it is almost universally frustrating to teachers. For one thing, they resent being excluded from decision areas about which they know a great deal. Just as distressing, they often find that they are expected to use time and energy they would ordinarily spend on activities related to their teaching responsibilities for decision-making in areas they would just as soon leave to administrators.

Thus, when researchers and others ask, "do teachers want increased decision-making authority regarding school policy and operations?" this turns out to be the wrong ques-

tion, since the answer is totally dependent on the particular decision area under consideration.

Other constraints on decision making. Schools are sometimes asked to implement programs of school-based management while continuing to function within the constraints imposed by existing federal, state, school board, district, and teacher union regulations. In these situations, school personnel sometimes find that there is very little left for them to manage.

Research has shown that increased flexibility and selective waiving of these constraints is associated with more successful school-based management efforts.

Along with insufficient time, training, and/or latitude, another obstacle frequently encountered in school-based management efforts is lack of adequate financial resources. This may take the form of insufficient release time for planning and/or insufficient resources to implement plans once they are made.

At worst, these constraints can lead school personnel to view school-based management as unreal—the "same old thing" in the guise of an innovation. And research indicates that they are right. If districts and boards do not extend considerable decision-making latitude to schools, or they fail to provide the resources to enable staff to carry out decision responsibilities, school-based management becomes:

> ...just another moderately helpful public relations and communications vehicle tinkering with the peripheral issues of school governance and management (Lindquist 1989, p. 414)

or, as Taylor and Levine (1991) remark even more succinctly, "only a cosmetic attempt to improve the school" (p. 394).

Failure to focus on instructional programs and student outcomes. Site participants often fail to address subjects central to their instructional program, note Malen, Ogawa, and Kranz (1990a) and many other researchers, and such changes as are proposed are frequently not implemented. Moreover, these researchers point out that school-based management can actually *impede* the development and implementation of instructional improvements in settings where it diverts attention from teaching and learning.

The frequent failure of school-based management efforts to address the school's program of instruction is related to another—and perhaps more basic—problem. This is the tendency of those implementing school-based management to forget that it is not an end in itself, but rather a means to improving student performance through bringing about improvements in the quality of schooling. Mojkowski and Fleming (1988) speculate on the reason for this loss of perspective, pointing out that implementing school-based management is a complex undertaking:

> Considerable time and energy will be required to negotiate the details of new responsibilities and relations. There is a tendency, therefore, to place inordinate attention on the 'technology' of school-site management and forget the goal: an improving school where students learn at their potential (p. 14).

This topic will surface again in the discussion of the relationship between school-based management and student performance.

Stakeholder Attitudes Toward School-Based Management

Several researchers addressed the subject of the attitudes toward school-based management held by those who have been involved in SBM efforts. Some of these—most notably the attitudes of teachers toward certain types of decision-making responsibility—have been touched upon. Findings about attitudes are cited by Arterbury and Hord (1991); Brown (1987); Chapman (1990); Conley (1990); Malen, Ogawa, and Kranz (1990a,b); Peterson (1991); and Rosenholtz (1985).

- **School staff members** generally perceive their schools as being more responsive under decentralized arrangements, with responsiveness defined as the ability to adapt resources and procedures to student needs.

However, enthusiasm for SBM on the part of school staff has been shown to decline if the practice continues over a significant period of time and few or no improvements are noted in working conditions or student outcomes.

- **Parent and student** satisfaction with the schools has been shown to increase under school-based management.

- Surveys of **principals** have consistently shown a high degree of satisfaction with the move to school-based management, even though they also say that their workload has increased.

- **Teachers**, as previously noted, want to be able to make or influence decisions regarding curriculum and instruction and have often reacted negatively to participation in decision-making about organizational matters that bear little relationship to the classroom.

  However, teacher surveys also reveal that the decision areas in which teachers feel most *deprived* are those that address the "*strategic/operational interface*, the interaction between the school and the classroom....decisions about how children are assigned to classes, how teachers are assigned to classes, and how students are disciplined and promoted" (Conley 1990, pp. 542-543).

- **Site council members**, whether they are teachers, noncertified staff, parents, community members, or students, express resentment (1) if allowed to make decisions only about trivial matters, or (2) if their decisions have only very minor impact on school policy and operations, or (3) if they are told they are a decision-making body, but then have their decisions vetoed by the principal.

School-Based Management and Student Performance

The ultimate measure of the value of school-based management will be the outcomes observed in students who attend site-managed schools. As expressed by Arterbury and Hord (1991), "site-based decision making should be explicitly considered as a means to increased learner outcomes" (p. 7).

Researchers examining the relationship between SBM and student performance—particularly achievement—include Arterbury and Hord (1991); Collins and Hanson (1991); Malen, Ogawa, and Kranz (1990a,b); B. Peterson (1991); D. Peterson (1991); and Taylor and Levine (1991). Their reports go beyond discussion of what they have found to include probable reasons for those findings.

Thus far, researchers have identified no direct link—positive or negative—between school-based management and student achievement or other student outcomes, such as attendance. In some settings, student scores (on standardized or local tests) have improved slightly, in others they have declined slightly, and in most settings no differences have been noted. "In sum," noted David Peterson (1991), "research as a whole does not indicate that site-based management brings consistent or stable improvements in student performance" (p. 2).

Reasons identified for this lack of impact on student performance echo observations made elsewhere in this review and include the following:

- Those reports that do claim beneficial impacts on achievement are generally flawed, failing to specify the order in which events took place or to distinguish between SBM and other possible causes.

- Student outcomes can be most powerfully impacted through improvements in curriculum and instruction, and school-based management efforts have often failed to address these areas of schooling.

- Improving student performance is not a stated goal in most school-based management efforts, and thus decisions are often made without student outcome goals in mind.

- There is no standard definition of school-based management. It appears that SBM structures which are positively related to student performance may be cancelled out in the research base by forms of SBM which are negatively related or unrelated.

- Some so-called school-based management arrangements are in reality merely variations on traditional hierarchical models rather than an actual restructuring of decision-making power.

Recommendations for Implementing and Operating School-Based Management Efforts in Districts and Schools

While school-based management programs in the aggregate have not been found to improve student outcomes thus far, researchers and other writers have pointed to the positive correlation between SBM and improved student outcomes in some settings. They contend that some forms of SBM have great potential for improving student performance.

The following are research-based recommendations which are offered to those who are considering implementation of school-based management structures in their schools and districts. They are drawn from the work of Amundson (1988); Arterbury and Hord (1991); Caldwell and Wood (1988); Ceperley (1991); David (1989); Duttweiler (1990); Henderson and Marburger (1990); Jenni (1991); English (1989); Levine and Eubanks (1989); Lewis (1989); Malen and Ogawa (1988); Malen, Ogawa, and Kranz (1990a,b); Mojkowski and Fleming (1988); and White (1989).

Recommendations to states. States have considerable power to help school-based management arrangements to succeed through providing real support of the concept and practice:

- Encourage districts to utilize school-based management as a means for improving student performance and overall schooling conditions.
- Make clear to superintendents and central office staff that schools will require considerable authority and flexibility to be able to engender real improvements.
- Be available to provide training, research-based information, and on-site assistance to help in the school-based management implementation process.
- Take advantage of opportunities to move away from highly regulated, compliance-driven services and accountability processes.

Recommendations to school districts. School-based management structures cannot succeed without the commitment and support of the superintendent and central office staff. Research indicates that districts can increase the likelihood of success of SBM by taking the following actions:

- Communicate to all educational stakeholders in the district what school-based management is and why it is desirable to implement this organizational structure.
- Make certain to communicate to stakeholders—when school-based management is implemented and continually thereafter—that it takes a long time for this approach to be fully implemented and to begin demonstrating significant and large-scale changes in schooling outcomes.
- Assess schools for climates amenable to implementation of school-based management.
- Work with schools and school communities to understand the ways that stakeholder roles will change and assist them to make these changes.
- Encourage schools to choose a manageable number of activities during the implementation phase of school-based management.
- Delegate real authority to schools to make decisions and plan and carry out improvement activities; require that this increased authority be in the hands of a site council with representatives from all key stakeholders in the school—principal, teachers, noncertified staff, parents, community representatives, and students.
- Designate someone in the central office to oversee the implementation and operation of school-based management efforts. One of this person's responsibilities should be to assure that site councils are actually

able to exercise the authority delegated to them, rather than being dominated by the principal.

- Provide information and training to school site councils, including:
  - — Clear guidelines about their role and the extent of their authority
  - — Content knowledge about student and overall school performance, policies, programs, budgets, facilities, personnel, local and state regulations, and other areas in which they will be expected to make or influence decisions
  - — Skills training in group processes, such as problem solving, decision making, conflict resolution, etc.
- Provide other needed resources, such as assuring time and financial support for planning and carrying out improvement activities.
- Encourage and support norms of collegiality and collaboration at the school level.
- Increase schools' latitude for decision making through helping them to have state and local regulations waived as appropriate.
- Involve teacher union representatives in early discussions of school-based management. When the benefits to teachers are understood, unions have shown willingness to be flexible about contract constraints.
- Assist schools to evaluate and modify their SBM structures and school improvement plans based on continuous review of program activities and their effects.

Recommendations to schools. The way that school-based management is supposed to function at the school site is usually specified to some degree by the district. The principal continues to have considerable influence over SBM operations, however, and is advised to pursue a form of SBM that has the following components:

- Help staff and community members to understand what school-based management is; emphasize that it is a means to the end of improving student outcomes through improving instruction and other schooling functions.
- Become familiar with the literature on school-based management so as to capitalize on what is known about successful approaches and to avoid or minimize common pitfalls.
- Redouble efforts to reach out to parents and community members and seek their involvement in this restructured form of school governance.
- Communicate broadly the willingness to share power, both nominally and in fact. Model the process of experiencing a change in one's role.
- Help staff and community members to understand the role changes called for by school-based management and help them to evolve into these new roles.
- Have the site council function as a true decision-making body, not merely an advisory one. This may already be a district requirement, but its reality needs to be reinforced at the school site.
- Reinforce the district message that full implementation of school-based management and realization of change in student outcomes takes a long time—five years or more. Underscore that SBM is not another short-term project, but rather a fundamental change in the way schools function. Move incrementally, seeking a balance (as Mojkowski and Fleming recommend) between "revolutionary practices" and "evolutionary pace" (1988, p. 13).
- Involve the teaching staff in making substantive decisions about the school's technical core—the curriculum and instructional program.
- Involve teachers in making substantive decisions in areas at the interface between school-level and classroom-level operations; these include student and teacher

class assignments and promotion and discipline policies and operations.

- Encourage and support norms of collegiality and collaboration through designating time for group planning and learning activities.

Researchers, theorists, and practitioners agree that an approach to school-based management which places real authority in the hands of broadly representative stakeholder groups, and then assures that those groups receive the training and resources they need to exercise that authority well, has immense potential for improving schooling governance, operations, and outcomes.

In a 1988 school improvement article, Henderson and Lezotte quote John Chubb, a senior fellow at the Brookings Institution, whose recent large-scale school study led to this same conclusion. Chubb writes:

> The more control a school has over those aspects of its organization that affect its performance—the articulation of its goals, the selection and management of its personnel, the specification of its policies—the more likely a school is to exhibit the qualities that have been found to promote effectiveness.

Key References

Arterbury, E., and Hord, S. M. "Site-Based Decision Making: Its Potential for Enhancing Learner Outcomes." *Issues...about Change* 1/4 (1991): entire issue.

Cites research regarding the failure of some site-based management structures to bring about changes in student outcomes and discusses the kind of site-based decision-making approach that can bring about improvements in student learning.

Brown, D. J. *Decentralization and School-based Management.* London: The Falmer Press, 1990.

Reviews the conceptual literature on school-based management and presents findings from research on school-based management in four Canadian districts and in the Cleveland (Ohio) Public Schools.

Brown, D. J. *A Preliminary Inquiry into School-Based Management.* Ottawa, Canada: Social Sciences and Humanities Research Council of Canada, March 1987. (ED 284 331)

Presents results of an inquiry into the nature and effects of school-based management in two large Canadian school districts. These SBM structures are limited to making personnel and some budgetary decisions, and the degree teacher involvement in decision making differs from school to school.

Burns, L. T., and Howes, J. "Handing Control to Local Schools: Site-Based Management Sweeps the Country." *The School Administrator* 45/7 (1988): 8-10.

Cites research findings which lend support to the practice of school site-based management and goes on to describe the process of implementing site-based management in the Parkway School District in Missouri.

Caldwell, S. D., and Wood, F. H. "School-Based Improvement—Are We Ready?" *Educational Leadership* 42/2 (1988): 50-53.

Draws upon policy review and interview findings to generate recommendations to districts for specifying roles and managing building-based improvement efforts in their schools.

Ceperley, P. "Site-Based Decisionmaking: Policymakers Can Support It or Undermine It." *The Link* 10/2 (1991): 1, 7-9.

Cites key findings from the research on site-based decision making and makes recommendations for actions that can be taken by states to improve the likelihood of success in site-based decision-making efforts.

Cistone, P. J.; Fernandez, J. A.; and Tornillo, P. L., Jr. "School-Based Management/ Shared Decision Making in Dade County (Miami)." *Education and Urban Society* 21/4 (1989): 393-402.

Provides background information and findings from a study of the implementation phase of Site-Based Management/ Shared Decision Making (SBM/SDM) in 33 pilot schools in the Dade County (Florida) school system.

Clune, W. H., and White, P. A. *School-Based Management: Institutional Variation, Implementation, and Issues for Further Research*. New Brunswick, NJ: Center for Policy Research in Education, Rutgers University, September 1988.

Reviews literature on school-based management and presents findings from telephone interviews with personnel at 31 schools using school-based management structures. Draws conclusions and offers recommendations for future research.

Collins, R. A., and Hanson, M. K. *School-Based Management/Shared Decision-Making Project, 1987-88 through 1989-90*. Summative Evaluation Report. Miami, FL: Dade County Public Schools, Office of Educational Accountability, January 1991. (ED 331 922)

Reports on the summative, district-level evaluation of 33 Dade County (Florida) schools that participated in a three-year pilot program, Site-based Management/ Shared Decision Making (SBN/SDM). Impacts on both operations and outcomes are cited.

Conley, S. C., and Bacharach, S. B. "From School-Site Management to Participatory School-Site Management." *Phi Delta Kappan* 71/7 (1990): 539-544.

Argues—and offers research to substantiate—that school-site management will not bring about the improvements called for in the reform literature unless it incorporates teachers' participation in making decisions in areas that are important to them.

Cuban, L. "Reforming Again, Again, and Again." *Educational Researcher* 19/1 (1990): 3-13.

Uses three examples—teacher- vs. student-centered instruction, academic vs. practical curriculum content, and centralization vs. decentralization of local school governance—to illustrate the tendency of reform efforts to recur in cyclical fashion. Discusses various theories about the persistence of these cycles.

Darling-Hammond, L. "Accountability and Teacher Professionalism." *American Educator* 12/4 (1988): 8-13, 38-43.

Outlines a model of teacher professionalism and cites the ways that extending greater authority to teachers will increase education's accountability to the public, rather than decreasing it, as some critics fear.

David, J. L., and Peterson, S. M. *Can Schools Improve Themselves: A Study of School-Based Improvement Programs*. Palo Alto, CA: Bay Area Research Group, 1984.

Reports the results of a study of six school-based improvement programs in different locations around the U.S. Key findings include that achieving meaningful school-based change is difficult and that the schools studied had thus far concentrated on the noninstructional aspects of schooling.

David, J. L. "Synthesis of Research on School-Based Management." *Educational Leadership* 46/8 (1989): 45-53.

Presents findings on school-based management, including the motivation behind district decentralization, the kinds of increases in authority schools typically assume, and the key elements of successful school-based management arrangements.

Duttweiler, P. C. "A Look at School-Based Management." *Insights on Educational Policy and Practice* 6 (January 1989). (ED 330 050)

Reviews literature on school-based management, giving special attention to the

role and responsibility changes that are experienced by different stakeholders in the educational system under SBM.

Duttweiler, P. C., and Mutchler, S. E. "Harnessing the Energy of People to Improve Schools." *Insights on Educational Policy and Practice*, Special Combined Issue (Summer 1990). (ED 329 021)

Reiterates findings presented in other recent issues of *Insights* regarding school-based management and shared decision making. Offers recommendations for districts considering implementation of these practices.

Etheridge, C. P., and Hall, M. L. *The Nature, Role and Effect of Competition, Cooperation, and Comprehension in Multiple Site Implementation of SBDM*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, April 1991.

Reports on a study of the relationship between different principal leadership styles and the functioning of local school councils in the Memphis City Schools as they implemented site-based decision making.

Firestone, W. A., and Corbett, H. D. "Planned Organizational Change." Chapter 16 in *Handbook of Research on Educational Administration*, edited by N. J. Boyan. New York: Longman, 1988.

Examines the research on planned organizational change in schools for its implications about how the change process should be managed so as to lead to positive results.

Gomez, J. J. "The Path Toward School-Based Management Isn't Smooth, But We're Scaling the Obstacles One by One." *American School Board Journal* 176/10 (1989): 20-22.

Describes the kinds of problems encountered by schools piloting school-based management in the Dade County Public Schools in Miami and identifies the kinds of action taken to deal with these typical problems.

Henderson, A., and Marburger, C. "Ten Pitfalls of School Based Improvement." *NETWORK for Public Schools* 15/5 (1990): 3-5.

Identifies ten problems commonly observed in connection with school-based management efforts and offers recommendations that can help schools and districts avoid or minimize these problems.

Hord, S. M. "The New Alliance of Superintendents and Principals: Applying the Research to Site-Based Decision Making." *Issues...about Change* 2/1 (Winter 1992): entire issue.

Reviews research on the behavior of superintendents in high-performing school districts, particularly those engaging in school-based management, to identify and encourage those superintendent behaviors that can lead to desirable schooling outcomes.

Jenni, R. W. "Application of the School Based Management Process Development Model." *School Effectiveness and School Improvement* 2/2 (1991): 136-151.

Introduces and applies a model to identify factors which enhance or inhibit the process of school decentralization. Focuses on the movement toward school-based management in two Minnesota school districts.

Johnston, G. S., and Germinario, V. "Relationship Between Teacher Decisional Status and Loyalty." *The Journal of Educational Administration* 23/1 (1985): 91-105.

Investigates teachers' levels of satisfaction with the nature and extent of their involvement in school decision making. Key findings include that the majority of teachers would like to be more involved in decision making and that they are most interested in participating in those decisions which pertain to the teaching-learning process.

Kolsti, K., and Rutherford, B. *Site-Based Management: Definitions, Implications, and Indicators*. Houston, TX: Houston Independent School District; Austin, TX: The University of Texas, September 1991.

Reviews literature on site-based management to clarify relationships between SBM and other school improvement concepts, outline SBM structures and roles of participants, identify implementation practices and issues, and describe the evolution and potential outcomes of SBM approaches.

Levine, D. U. "Creating Effective Schools: Findings and Implications from Research and Practice." *Phi Delta Kappan* 72/5 (1991): 389-393.

Draws upon the effective schooling research of the 1970s and 1980s to provide a set of guidelines for those interested in undertaking school improvement projects.

Levine, D. U., and Eubanks, E. E. "Site-Based Management: Engine for Reform or Pipedream? Problems, Prospects, Pitfalls, and Prerequisites for Success." In *Restructuring the Schools: Problems and Prospects*, edited by J. J. Lane and E. G. Epps. Berkeley, CA: McCutchan, 1992, 61-82.

Cites research findings regarding the advantages of site-based management over more centralized structures, problems encountered in implementing SBM, outcomes of implementation efforts, promising practices, and common areas of confusion that require greater clarification.

Lewis, A. "Meanwhile, At the School." Chapter IX in *Restructuring America's Schools*. Arlington, VA: American Association of School Administrators, 1989, 173-190.

Describes the kinds of changes which take place during the evolution from centralized control to school-based management structures. Presents results from studies of school-based management and profiles of particular schools.

Lieberman, A., and Miller, L. "Restructuring Schools: What Matters and What Works." *Phi Delta Kappan* 71/10 (1990): 759-764.

Discusses approaches to school restructuring, its essential components, major issues, and the need to achieve a balance between (1) students' learning needs and teachers' workplace needs and (2) taking action and reflecting upon learnings.

Lindelow, J., and Heynderickx, J. "School-Based Management." In *School Leadership: Handbook for Excellence*, 2nd edition, edited by S. C. Smith and P. K. Piele. Eugene, OR: ERIC Clearinghouse on Educational Management, 1989, 109-134.

Presents a brief history of centralization and decentralization trends in U. S. education, identifies deficiencies present in centralized structures, provides a rationale for educational decentralization, and describes SBM practices and several districts.

Lindquist, K. M., and Mauriel, J. J. "School-Based Management: Doomed to Failure?" *Education and Urban Society* 21/4 (1989): 403-416.

Draws upon the growing research base on school-based management and profiles SBM structure and history in two districts to identify reasons for the frequent failure of SBM to produce more positive outcomes.

Malen, B., and Ogawa, R. T. "Professional-Patron Influence on Site-Based Governance Councils: A Confounding Case Study." *Educational Evaluation and Policy Analysis* 10/4 (1988): 251-270.

Reports on case studies of the operations of site councils in the Salt Lake City (Utah) Public Schools. Found that the existence of structures thought to be conducive to broad-based decision making did not in fact lead to increases in parent and teacher influence on policy.

Malen, B.; Ogawa, R. T.; and Kranz, J. "Site-Based Management: Unfulfilled Promises." *The School Administrator* 47/2 (1990a): 30, 3[illegible]-56, 59.

Presents the results of a review of approximately 200 documents describing past and present site-based management arrangements and their outcomes in the U. S., Canada and Australia. Concludes that SBM has generally failed to meet its stated objectives. Also reported in Malen, et al. 1990b.

Malen, B.; Ogawa, R. T.; and Kranz, J. "What Do We Know About School-Based Management? A Case Study of the Literature—A Call for Research." Chapter 8 in *Choice and Control in American Education, Volume 2: The Practice of Choice, Decentralization and School Restructuring,* edited by W. H. Clune and J. F. Witte. New York: The Falmer Press, 1990b.

Provides a detailed discussion of a literature review on the nature and outcomes of school-based management efforts in American, Canadian, and Australian school districts. Also reported in Malen, et al. 1990a.

Mojkowski, C., and Fleming, D. *School-Site Management: Concepts and Approaches.* Andover, MA: The Regional Laboratory for Educational Improvement of the Northeast and Islands, 1988.

Provides the rationale for school-site management, identifies its components, gives brief descriptions of various school-site management projects around the country, and offers suggestions to those wishing to plan and implement school-site management.

Mutchler, S. E. "Eight Barriers to Changing Traditional Behavior: Part One." *Insights on Educational Policy and Practice* 18 (March 1990). (ED 330 058)

Cites barriers to effective school-based management and shared decision making as identified by respondents to a 1989 Southwest Educational Development Laboratory survey of educational practitioners.

Mutchler, S. E. "Eight Barriers to Changing Traditional Behavior: Part Two." *Insights on Educational Policy and Practice* 19 (April 1990). (ED 330 059)

Cites barriers to effective school-based management and shared decision making as identified by respondents to a 1989 Southwest Educational Development Laboratory survey of educational practitioners.

Mutchler, S. E. "Shared Decision Making: Harnessing the Energy of People." *Insights on Educational Policy and Practice* 20 (December 1989). (ED 330 070)

Reviews findings from investigations into school-based management and concludes that the success of SBM depends on (1) the degree to which authority is delegated to the school site and (2) the distribution of that authority at the site.

Peterson, B. "How School-Based Management Is Faring in Miami." *Education Week* (June 12, 1991): 26.

Clarifies previous writings about the nature and effects of SBM in the Dade County Public Schools. Highlights: SBM has brought about some improvements, but student achievement has either declined or remained unchanged. Recommendations are offered.

Peterson, D. "School-Based Management & Student Performance." *NASSP ERIC DIGEST* 61 (1991): entire issue.

Summarizes recent research on the relationship between the use of school site-based management structures and student achievement. Claims that the limited research conducted thus far does not support SBM as a means to improving students' academic performance, possibly because so much SBM implementation is superficial and lacks the power to bring about meaningful change.

Taylor, B. O., and Levine, D. U. "Effective Schools Projects and School-Based Management." *Phi Delta Kappan* 72/5 (1991): 394-397.

Contends that, although school-based management has potential for helping schools to improve themselves, educators should not implement site-based management for its own sake. Rather, they should make use of the findings from the

school effectiveness research in their school improvement efforts.

Valesky, T. C.; Forsythe, G.; and Hall, M. L. *Principal Perceptions of School-Based Decision Making in Tennessee Schools.* Policy Practice Brief. Memphis TN: Center for Research in Educational Policy, Memphis State University, January 1992.

Presents results of a survey of 46 principals in schools using school-based management. Responses concerned the nature of decision making in schools, school improvement, and problems related to SBM.

White, P. A. "An Overview of School-Based Management: What Does the Research Say?" *NASSP Bulletin* 73/518 (1989): 1-8.

Discusses school-based management—its objectives, typical structures, potential benefits, and limitations and offers guidelines to those who wish to implement site-based management structures in their schools.

General References

Amundson, K. J. *School-Based Management: A Strategy for Better Learning.* Arlington, VA: American Association of School Administrators; National Association of Elementary School Principals; National Association of Secondary School Principals, 1988.

Provides a definition and rationale for school-based management, along with a discussion of the ways educators' roles can be expected to change under SBM, recommendations for implementation, and a description of frequently encountered obstacles to success.

Aronstein, L. W.; Marlow, M.; and Desilets, B. "Detours on the Road to Site-Based Management." *Educational Leadership* 47/7 (1990): 61-63.

Gives examples of problems encountered and lessons learned during a Massachusetts middle school's evolution from traditional, top-down management to shared decision making.

Carr, T. A. "Second-Wave Reforms Crest at Local Initiative." *The School Administrator* 45/7 (1988): 16-18.

Discusses the potential of school site-based management for improving education and outlines the approach to SBM taken in the Richardson Independent School District in suburban Dallas, Texas.

Casner-Lotto, J. "Expanding the Teacher's Role: Hammond's School Improvement Process." *Phi Delta Kappan* 69/5 (1988): 349-353.

Describes the Hammond, Indiana school district's School Improvement Process (SIP), a building-based method of school management. Provides examples of the SIP's operation at a variety of Hammond schools and cites numerous program, role, and attitude changes as indicators of success.

Chapman, J. D., ed. *School-based Decision-making and Management.* London: The Falmer Press, 1990.

Presents a series of essays on research, theory, and other aspects of school-based management and decision making, particularly in relation to the educational systems in Australia and England.

Conley, D. T. "Lessons from Laboratories in School Restructuring and Site-Based Decision-Making: Oregon's '2020' Schools Take Control of Their Own Reform." *OSSC Bulletin* 34/7 (March 1991): entire issue.

Discusses the activities engaged in by schools that are recipients of grants from the State of Oregon for school improvement and professional development in 1990-91.

Conley, S. C. "'Who's on First?' School Reform, Teacher Participation, and the Decision-Making Process." *Education and Urban Society* 21/4 (1989): 366-379.

Argues that school reform efforts could benefit from giving greater attention to two fundamental distinctions: (1) the distinction between authority and influ-

ence in school decision making and (2) the distinction among different domains of decision making.

Conley, S. C.; Schmidle, T.; and Shedd, J. B. "Teacher Participation in the Management of School Systems." *Teachers College Record* 90/2 (1988): 259-280.

Discusses the rationale for increasing teacher participation in decisions regarding school management and outlines the various ways that teachers perform managerial functions in schools. Argues that, to perform effectively in their jobs, boards and administrators need teachers' participation in school management.

Dreyfuss, G. "Dade County Opens Doors to Site Decisions." *The School Administrator* 45/7 (1988): 12-15.

Describes the actions taken to bring about site-based management in 32 of the schools in the Dade County Public Schools in Miami, Florida.

English, F. "School-Site Management." *The Practitioner* 16/2 (1989): entire issue.

Offers a definition of school-site management, provides a brief history of efforts to decentralize schooling, discusses areas of decision making that might benefit from decentralization, and offers a strategy for those wishing to implement school-site management.

Geisert, G. "Participatory Management: Panacea or Hoax?" *Educational Leadership* 46/3 (1988): 56-59.

Takes issue with the recommendations of the report of the Carnegie Forum on Education and the Economy, *A Nation Prepared: Teachers for the 21st Century*. Claims that implementation of the report's recommendations will put too much power in the hands of teachers and will result in inefficiency.

Harrison, C. R.; Killion, J. P.; and Mitchell, J. E. "Site-Based Management: The Realities of Implementation." *Educational Leadership* 46/8 (1989): 55-58.

Provides, for the benefit of other school districts seeking to decentralize their operations, a description of problems encountered and lessons learned in the Adams County (Colorado) School District during the three years since decentralization efforts began.

Hawthorne, R. D. "Analyzing School-Based Collaborative Curriculum Decision Making." *Journal of Curriculum and Supervision* 5/3 (1990): 279-286.

Reports the results of several inquiries into the nature of teachers' curriculum decision making. Findings include that teachers think they make more decisions than they actually do, and that decisions are rarely made based on a vision for the total curriculum.

Henderson, A., and Lezotte, L. "SBI (School Based Improvement) and Effective Schools: A Perfect Match." *NETWORK for Public Schools* 13/5 (1988): 1, 3-5.

Discusses school-based improvement, including the conviction that school-based management can foster the implementation of the instructional and organizational practices associated with effective schools.

Herzog, S. E. *A New Look at Empowerment: How Educators and Communities Can Empower Each Other*. Arlington, VA: American Association of School Administrators, 1990.

Details ways that key actors in the educational system—central office staff, principals, teachers, parents, community members and students—can extend greater influence and respect to one another and become empowered themselves.

Kelly, T. F. "Five Ways to Make Your Schools Effective." *The School Administrator* 47/2 (1989): 26, 29.

Cites and discusses five principles which have been identified in relation to effective schools participating in New York's Comprehensive School Improvement Planning process.

Lewis, J., Jr. *Planning Guidelines for Implementing School-Based Management.* Westbury, NY: J. L. Wilkerson Publishing Company, 1989.

Uses a "facilitation module" format to present guidelines for use by those seeking to plan and implement site-based management in their school settings. Its 25 steps or "sections" address topics from information gathering through policy development.

Marburger, C. L. *One School at a Time: School Based Management—A Process for Change.* Columbia, MD: The National Committee for Citizens in Education, 1985.

Outlines the rationale for and history of the move towards school-based management, describes typical SBM structures, and offers guidelines for those considering implementing SBM in their districts.

Mitchell, J. E. "Share the Power." *American School Board Journal* 177/1 (1990): 42-43.

Offers a list of experience-based recommendations to school board to assist them in fostering school-based management efforts in their districts.

Mitchell, J. E. "Site-Based Management: Coaxing Staff from Cages for Site-Based Decisions to Fly." *The School Administrator* 47/2 (1990): 23-24, 26.

Argues that the reluctance of school staff to get involved in site-based management and decision making comes from (1) a fear of trying new things, (2) lack of training, and (3) fear that staff's ideas and proposals will be blocked by principals, superintendents, boards, or others.

Moses, M. C., and Whitaker, K. S. "Ten Components for Restructuring Schools." *The School Administrator* 47/8 (1990): 32-34.

Advises school districts considering restructuring to adapt ten general suggestions to their own local situations. Sees site-based decision making as an essential feature of an effectively restructured school.

Murphy, J. A. *Improving the Education of At-Risk Students. A System of Checks and Balances.* Upper Marlboro, MD: Prince George's County Public Schools, February 1990. (ED 325 539)

Reviews the activities which have led to improved academic outcomes for at-risk students in a Maryland school district. A focus on student outcomes, staff development, school control of budgets, and additional resources were key features.

Rosenholtz, S. J. "Effective Schools: Interpreting the Evidence." *American Journal of Education* 93/3 (1985): 352-388.

Draws upon findings from many research studies to identify the organizational and instructional factors which differentiate effective inner-city schools from ineffective ones.

Sirotnik, K. A., and Clark, R. W. "School-Centered Decision Making and Renewal." *Phi Delta Kappan* 69/9 (1988): 660-664.

Argues that schools should be regarded, not as targets to be acted upon, but rather as centers of critical inquiry, in which participants engage in asking questions and pursuing activities designed to keep discourse alive, informed, and based on values.

Sparks, D. "Creating Cooperative Schools: An Interview with David and Roger Johnson." *Journal of Staff Development* 11/1 (1990): 44-46.

Outlines the key features of "cooperative schools"—schools in which cooperative approaches are valued and practiced by both staff and students.

Strauber, S. K.; Stanley, S.; and Wagenknecht, C. "Site-Based Management at Central-Hower." *Educational Leadership* 47/7 (1990): 64-66.

Describes the structure for decision making adopted by this Akron, Ohio high school. Major components include a Faculty Senate, a Curriculum Council, and long- and short-term goal-setting cycles.

White, P. A. *Resource Materials on School-Based Management.* New Brunswick, NJ: Center for Policy Research in Education, Rutgers University, September 1988.

Cites contact people, provides program descriptions, and offers an annotated bibliography of print resources on school-based management. Most information is from the 1970s and early 1980s.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Close-Up #13

Developing Empathy in Children and Youth

Kathleen Cotton

> Moral imagination is the capacity to empathize with others, i.e., not just to feel for oneself, but to feel with and for others. This is something that education ought to cultivate and that citizens ought to bring to politics.
>
> —McCollough 1992

Introduction

"Do We Really Want to Produce Good People?" asks education professor, Dr. Nel Noddings, in the title of a 1987 article. Do we concur with philosopher Martin Buber's conviction that "education worthy of the name is essentially education of character"? Is it the business of the schools to seek to develop in young people the character traits we associate with goodness—traits such as kindness, generosity, compassion, and helpfulness?

These are far-reaching questions; and educators, legislators and the public can be expected to continue expressing different—and sometimes heated—points of view about the teaching of "values" and "morals" in the schools.

The present report will not take on the full weight of these numerous and complex issues. Instead, the intent here is to offer some insights from the research about one aspect of "goodness" that is of particular current interest to educators and society—the quality of empathy.

If we ask, "what are the characteristics of a capable, successful learner?" one view that is gaining increasing currency among educators is the notion that successful learners are knowledgeable, self-determined, strategic, and empathetic* (Jones 1990). That is, in addition to having (1) knowledge, including critical and creative faculties; (2) motivation to learn and confidence about themselves as learners; and (3) tools and strategies for acquiring, evaluating, and applying knowledge; successful learners also have (4) insight into the motives, feelings, and behavior of others and the ability to communicate this understanding—in a word, empathy.

Jones (1990) identifies some of the reasons that empathetic understanding is seen as an important trait of the successful learner:

* Researchers and other writers use the word "empathetic" and the word "empathic" to designate a person or response characterized by empathy. Both are correct.

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School Improvement Program

> Successful students often recognize that much of their success involves their ability to communicate with others...they are also able to view themselves and the world through the eyes of others. This means... examining beliefs and circumstances of others, keeping in mind the goal of enhanced understanding and appreciation....Successful students value sharing experiences with persons of different backgrounds as enriching their lives (p. 19).

Regardless of conflicting views about the appropriate place, if any, of "values education" in the schools, people are generally able to agree that developing this capacity to understand, appreciate, and communicate meaningfully with others is an important and desirable goal. This enables us to move away from our differences of opinion about the specific *content* of "good character," focusing instead on the *process* whereby people come to care about one another and communicate that caring through their behavior.

Definition

"Unfortunately," writes Pecukonis (1990) "the literature has been confounded by definitional controversy. The essence of this disagreement is the extent to which either cognitive processes or affective experiences formulate the empathic response" (p. 60). Readers of the present report will be spared the details of this controversy. Suffice it to say that most of the psychologists and educators whose work was consulted in preparation for this report agree that empathy includes both elements. As Gallo (1989) puts it:

> ...an empathic response is one which contains both a cognitive and an affective dimension....the term empathy [is] used in at least two ways; to mean a predominantly cognitive response, understanding how another feels, or to mean an affective communion with the other (p. 100).

Carl Rogers (1975) wrote:

> ...the state of empathy or being empathic is to perceive the internal frame of reference of another with accuracy and with the emotional components and means which pertain thereto as if one were the person, but without ever losing the 'as if' condition (Quoted in Gallo 1989).

And *The American Heritage Dictionary of the English Language* defines empathy as "understanding so intimate that the feelings, thoughts and motives of one are readily comprehended by another."

In addition to the shared feeling and accurate understanding dimensions of empathy, some writers also focus on the empathetic person's communication of understanding to the person whose "internal frame of reference" he or she has grasped. Thus, some definitions include this element, e.g., Haynes and Avery's characterization of empathy as:

> ...the ability to recognize and understand another person's perceptions and feelings, and to accurately convey that understanding through an accepting response (p. 527).

Such a response may involve verbal confirmation of understanding and/or supportive looks and body language, and prosocial behavior such as sharing goods or providing help.

Because different writers emphasize different aspects of empathy, the measures of empathy used in the research include assessments of subjects' emotional states, their cognitive perceptions, and/or their behavior.

The Literature on Empathy

This paper is the result of a review of fifty-eight articles, books, and other publications. Thirty-seven of these are reports of research studies or reviews, while twenty-one are writings of a more general nature. These latter include, for example, discussions of the nature, source, and development of empathy in people and descriptions of activities designed to enhance empathy.

Of the research documents, thirty-two are studies or evaluations, four are reviews or meta-analyses, and one reports results of both a review and evaluation. Subjects of the research are preschoolers (six studies), elementary students (fourteen), secondary

students (four), elementary and secondary students (six), university students and other adults (six), and the age/grade of students in one study was not specified.

Both sexes and various racial/ethnic groups are represented among the research subjects. Of the school-age participants, most are students in regular school programs, but special education students are also represented, as are delinquent and other incarcerated youth. Most subjects are American, although the research base also includes studies involving Finns, Israelis, Australians, and Canadians.

Practices and treatments whose effects were investigated include empathy training (nineteen studies), childrearing practices and other home factors (eight), and classroom strategies and program designs (seven). Three studies identified correlations between empathy and other traits.

Looking at outcome areas, twenty-one of the reports were concerned with subjects' scores on measures of cognitive and/or affective empathy. Other outcome areas include:

- Prosocial behavior (e.g., sharing, helping, comforting, making reparations)—nineteen reports
- Cross-racial, -ethnic, or -nationality acceptance and respect—four reports
- Additional indicators, such as school attendance, self-esteem, self-disclosure, self-control, and aggression—five reports.

Research Findings

CHILDREARING PRACTICES

Researchers have identified relationships between the use of certain parental childrearing practices and the development of empathetic feelings, understanding, and social behavior in children:

- **Mothers** whose behavior toward their preschool children is **responsive, nonpunitive, and nonauthoritarian** have children who have higher levels of affective and cognitive empathy and prosocial behavior (Eisenberg, Lennon, and Roth 1983; Eisenberg-Berg and Mussen 1978; Kestenbaum, Farber, and Sroufe 1989; and Zahn-Waxler, Radke-Yarrow, and King 1979).
- **Reasoning with children**, even quite small ones, about the effects of their behavior on others and the importance of sharing and being kind is effective in promoting empathy and prosocial behavior (Clarke 1984; Kohn 1991; Ladd, Lange, and Stremmel 1983; and Zahn-Waxler, Radke-Yarrow, and King 1979).
- **Parental modeling of empathetic, caring behavior** toward children—and toward others in the children's presence—is strongly related to children's development of prosocial attitudes and behavior (Eisenberg-Berg and Mussen 1978; Kohn 1991; McDevitt, Lennon, and Kopriva 1991; and Zahn-Waxler, Radke-Yarrow, and King 1979).
- **When children have hurt others** or otherwise caused them distress, research supports the practice of giving explanations as to why the behavior is harmful and suggestions for how to make amends (Kohn 1991; and Zahn-Waxler, Radke-Yarrow, and King 1979).
- **Parents encouraging school-age children to discuss their feelings and problems** is positively related to the development of empathy in those children (Clarke 1984).

Researchers have also identified childrearing practices which are *negatively* related to the development of empathy:

- **Threats and/or physical punishments** meted out in an attempt to improve children's behavior are counterproductive (Clarke 1984; Eisenberg-Berg and Mussen 1978; Kohn 1991; and Zahn-Waxler, Radke-Yarrow, and King 1979).
- **Inconsistent care** (e.g., inconsistency in parents' reactions to children's emotional needs) and **parental rejection/withdrawal** in times of children's emotional needs are both associated with low levels of empathy on the parts of the children (Kestenbaum, Farber, and Sroufe 1989).

- Children from **homes in which their fathers physically abuse their mothers** have low levels of empathy. For example, they are typically unable to recognize the emotional states of other people and respond appropriately (Hinchey and Gavelek 1982).

- The provision of **extrinsic rewards or "bribes"** to improve children's behavior is counterproductive. As with other research on extrinsic rewards, researchers have found that providing payoffs for prosocial behavior focuses attention on the reward rather than the reason for it and that the desired behaviors tend to lessen or disappear when the reward is withdrawn (Kohn 1991).

EMPATHY TRAINING

Research supports the provision of empathy training to enhance empathetic feelings and understanding and increase prosocial behavior. This applies to children of all ages and to adults, and characterizes both full-scale empathy training programs and short-term treatments. The specific components within empathy training approaches that are associated with increases in empathy include:

- **Training in interpersonal perception and empathetic responding.** A cognitive approach, in which students learn what empathy is, how it develops, how to recognize different emotive states in themselves and others, and how to respond to others positively, enhances their empathetic perceptions and skills (Black and Phillips 1982; Herbek and Yammarino 1990; Kalliopuska 1983; Kremer and Dietzen 1991; Pecukonis 1990; and Perry, Bussey, and Freiberg 1981).

- **Initial focus on one's own feelings.** When seeking to increase the ability of children to assume another's perspective, it is most fruitful to have them focus first on their own feelings—the different kinds of feelings they have and what feelings are associated with what kinds of situations (Black and Phillips 1982; and Dixon 1980).

- **Focus on similarities between oneself and others.** Activities which focus children's attention on similarities between themselves and another person (or other persons) is effective in increasing affective and cognitive empathy (Black and Phillips 1982; Brehm, Fletcher, and West 1988; Clarke 1984; Dixon 1980; and Hughes, Tingle, and Sawin 1981). Identifying these similarities is the logical next step following the focus on one's own feelings. As Brehm, Fletcher, and West (1988) point out:

  > Virtually all considerations of the empathic process have noted the close connections between responding empathically to another person and perceiving that person as similar to oneself (p. 8).

  By way of example, Hahn (1980) found that cross-cultural empathy is enhanced if classroom activities focus first on the similarities between other cultures and one's own society and only later begin calling attention to differences.

- **Role-taking or role-playing.** Activities which call for children or adults to assume the role of a real or fictional person and to imagine or act out that person's feelings and/or behavior are effective in increasing both affective and cognitive empathy (Barak, et al. 1987; Black and Phillips 1982; Herbek and Yammarino 1990; Kremer and Dietzen 1991; Morgan 1983; and Underwood and Moore 1982). Increases in empathy are noted even when children are asked to imagine the point of view of an animal, plant, or inanimate object.

  A special case of role-taking and identification of similarities with others is a collection of activities which has been used to increase able-bodied students' **understanding of and empathy for the physically handicapped**.

  Robinson (1979) describes the content and beneficial results of a program in which students hear handicapped speakers, become familiar with prosthetics and other appliances used by the handicapped, and engage in role-taking experiences which approximate handicapping conditions. The outcome of these activities is that participating children:

> ...began to be able to look beyond the handicaps, realizing that the handicap is not the person (p. 25).

- **Ongoing practice in imagining/perceiving another's perspective.** Repeated practice at taking another's perspective is more effective than one-shot or infrequent efforts to do so (Black and Phillips 1982; Haynes and Avery 1979; Kalliopuska 1983; Kremer and Dietzen 1991; and Pecukonis 1990). For many people, including the very young, the ability to imagine and gain insight into another person's point of view does not come easily. Sustained practice at role- or perspective-taking is an effective means to increasing levels of empathy.

- **Exposure to emotionally arousing stimuli.** Exposure to stimuli such as portrayals of misfortune, deprivation, or distress on the part of others tends to increase empathetic feelings and responses (Barnett et al. 1982; Howard and Barnett 1981; Pecukonis 1990; and Perry, Bussey, and Freiberg 1981). Encouragement by trainers or experimenters to think about others and their needs also stimulates these feelings and responses.

- **Positive trait attribution.** Positive trait attribution—or "dispositional praise"—refers to the practice of emphasizing to children that the reason they exhibit prosocial behavior is that it is their nature to do so. Positive trait attribution has been shown to be a powerful means of enhancing empathetic understanding and behavior.

  For example, a teacher or experimenter might say to a child, "I'll bet you shared with Susie because you're a nice person who likes to make other children happy." Researchers (e.g., Kohn 1991; Mills and Grusek 1989; and Perry, Bussey, and Freiberg 1981) have found that reinforcing to children that they have a certain positive trait within them increases those children's performance of behaviors congruent with that trait. Kohn (1991) writes:

  > ...the teacher's goal should not be simply to produce a given behavior...but to help that child see himself or herself as the kind of person who is responsible and caring. From this shift in self-concept will come lasting behavior and values that are not contingent on the presence of someone to dispense threats or bribes (p. 501).

- **Modeling empathetic behavior.** Just as the research on childrearing shows that parental modeling of empathetic speech and actions enhances children's empathy and prosocial behavior, the empathy training research shows that when teachers (trainers, experimenters, etc.) model desired values, children are more likely to adopt these than when they are merely exhorted to behave in a certain way (Kohn 1991; and Kremer and Dietzen 1991).

- **Studying famous empathetic persons.** Learning activities which focus students' attention on the lives and achievements of famous empathetic persons have been shown to increase children's desire to be like these people and to take on attitudes and behaviors associated with them (Dixon 1980). People who have been the focus of such learning activities include Florence Nightingale, Martin Luther King, Jr., Albert Schweitzer, and Mother Theresa.

In addition to increasing empathetic feelings, understanding, and behavior, empathy training has also been shown to produce other positive outcomes. For example, empathy training has led to increased willingness on the part of older students to be open and self-revealing (Haynes and Avery 1979) and to take everyone's needs into account when dealing with conflict situations (Kohn 1991). Better teamwork and greater job satisfaction have followed empathy training provided to adults (Herbek and Yammarino 1990).

Other and equally significant outcomes have been noted as a result of empathy training. Discussing these requires attention to some general findings from the empathy research, as follows.

Empathy and gender. Generally speaking, females of all ages exhibit higher levels of empathy—particularly affective empathy—than do males (Barnett, et al. 1980; Borden, Karr, and Caldwell-Colbert 1988; Eisenberg-

Berg and Mussen 1978; McDevitt, Lennon, and Kopriva 1991; Mills and Grusec 1989; Siegal 1985, etc.). While there is not a great deal of research on the differential effects of childrearing behaviors and empathy training on males and females, the work of some researchers (e.g., Eisenberg-Berg and Mussen 1978; Haynes and Avery 1979; and Clarke 1984) indicates that empathetic modeling and training have potential for reducing the gap between the empathy levels of boys/men and girls/women.

Empathy and age. Research clearly demonstrates that adults exhibit greater degrees of empathetic feeling, understanding, and responsiveness than children, and that older children are more empathetic and prosocial than very young ones (Ellis 1982; Hughes, Tingle, and Sawin 1981; Kalliopuska 1983; Ladd, Lange, and Stremmel 1983; McDevitt, Lennon, and Kopriva 1991; and Underwood and Moore 1982).

Older youth are better able to recognize emotive states in other people, more capable of relating to and sharing others' feelings, able to feel empathy for more diverse kinds of people, and more willing to express their empathetic response in generosity toward others. The developmental level of very young children, by contrast, is characterized by greater self-involvement, frequent objectification of others, and a tendency to experience and act on empathetic feelings only toward people very much like themselves in age, ethnicity, and gender.

Underwood and Moore (1982) identify role-taking capacity as the basis for the greater levels of empathy/prosocial behavior one sees in older children as compared with younger ones:

> The developmental mechanism that is used most frequently to explain age-related increases in altruistic behavior is the increasing ability of the child to take the point of view of the other person (p. 144).

Despite these developmental differences, researchers have found that empathy training—including even very simple things such as calling attention to less fortunate children or pointing out to a child that he/she has the power to make someone else happy by sharing—can increase young children's empathy scores and incidences of prosocial behavior. Analogous to the research finding that empathy training produces greater increases in the empathetic understanding and behavior of males than females is the finding that younger children's empathy levels increase more than those of older youth following activities designed to increase empathy (Iannotti 1978; and Kalliopuska 1983). In both cases, the lower the initial scores on empathy measures, the greater the change following empathy training or instructions.

Empathy and academic outcomes. One of the arguments against character-related educational activities is that they take precious time away from the development of basic and higher-order cognitive skills. The research, however, shows an impressive correlation between students' training and skills in empathetic understanding and their academic performance:

- Researchers (e.g., Bonner and Aspy 1984) have identified significant correlations between students scores on measures of empathetic understanding and their grade point averages.

- Program evaluation results have shown that schools where students are involved in programs designed to increase empathy and create "caring communities" have higher scores than comparison schools on measures of higher-order reading comprehension (Kohn 1991).

- Review of research related to empathy training/instruction indicates that this instruction enhances both critical thinking skills and creative thinking (Gallo 1989). Gallo writes:

> ...the empirical evidence establishes that it is not just moral reasoning but reasoning generally which benefits from empathic understanding (p. 100).

Gallo goes on to explain that "the attributes which characterize empathy correlate with those of effective critical thinking and imagination" (p. 114). She notes that role-taking, a key feature of empathy training, engenders the kinds of mental habits we associate with astute thinking. Role-taking:

- Fosters insight into different perspectives and promotes genuine open-mindedness
- Discourages hasty and superficial problem examination
- Facilitates construction of more fully elaborated—and frequently novel—problem models
- Discourages belief rigidity
- Encourages cognitive and personal flexibility
- Practices persistent probing, engaged examination of an issue in alternation with flexible relinquishment and reflective distance (p. 112-113).

CLASSROOM STRATEGIES AND PROGRAM DESIGNS

In addition to programs and activities specifically intended to promote empathy, researchers have also identified several classroom strategies and program designs which tend to foster increases in empathy and prosocial behavior.

Cooperative learning. Over the last decade a great deal has been written about the academic and social benefits of cooperative learning. From a research perspective, the major finding has been that organizing learners into teams whose members differ from one another in race/ethnicity, gender, ability level, and other attributes, results in significantly greater prosocial interaction among these different learners (Johnson, Johnson, and Anderson 1983; Kohn 1991; and Slavin 1985). Following participation in cooperative learning groups, students report and are observed to exhibit:

- More accepting and respectful attitudes toward people whose race/ethnicity, gender, ability level, socioeconomic level, ability-disability status, etc. is different from one's own
- Increased ability to relate to more kinds of people
- A more sophisticated ability to imagine other people's points of view
- Greater understanding and appreciation of the different strengths that diverse people can bring to a learning team
- More and deeper cross-racial and -ethnic friendships.

Kohn (1991) writes:

> Cooperation is an essentially humanizing experience that predisposes participants to take a benevolent view of others. It allows them to transcend egocentric and objectifying postures and encourages trust, sensitivity, open communication and prosocial activity (p. 504).

Cross-age and peer tutoring. Students' empathetic feelings, understanding, and behavior have been shown to increase as a result of serving as peer or cross-age tutors (Morgan 1983; and Yogev and Ronen 1982). Following their study of the effects of secondary-level cross-age tutoring, Yogev and Ronen conclude that it:

> ...significantly increases the tutors' empathy, altruism, and self-esteem...To help younger students, the tutors must develop an empathic understanding of the tutees, show a certain extent of self-confidence in their relationships, and appreciate in general the intrinsic benefits of help giving (p. 267).

Humanistic/psychoeducational approaches for the emotionally disturbed. Finally, the research on different approaches to educating emotionally disturbed children indicates that structures congruent with the empathy-enhancing activities we have been discussing are far preferable to other structures. For example, Morgan (1983) studied the relative effects of a humanistic/psychoeducational model and a behavioral/learning model. The former, characterized by group meetings, a focus on how one's behavior affects others, peer tutoring, and role playing, was related to greater empathy, responsibility, and self-control than the latter, which featured token reinforcement for good work and behavior, behavioral charting, and punishment for poor work habits and behavior.

Summary

To review, then, findings identified in the research base on empathy development are as follows:

- Along with knowledge, self-determination, and strategy utilization, **empathy** is coming to be regarded by more and more educators as a **key attribute of a successful learner**.

- **Empathy** is typically **defined** as including: (1) the **affective capacity** to share in another's feelings, and (2) the **cognitive ability** to understand another's feelings and perspective. Definitions sometimes also include the **ability to communicate** one's empathetic feelings and understanding to another by verbal and/or nonverbal means.

- **Childrearing practices *positively* associated with the development of empathetic understanding and behavior** include:

  — Responsive, nonpunitive, nonauthoritarian behavior of mothers toward their preschool children

  — Explaining to children the effects of their behavior on others

  — Pointing out to children that they have the power to make others happy by being kind and generous to them

  — Parental modeling of empathetic, caring behavior

  — Explaining to children who have hurt or distressed others why their behavior is harmful and giving them suggestions for making amends to those hurt

  — Encouraging school-age children to discuss their feelings and problems with parents.

- **Childrearing practices which are *negatively* related to the development of empathetic understanding and behavior** include:

  — Threats and physical punishments aimed at inducing children to "behave properly"

  — Inconsistent behavior toward children's expression of emotional needs or rejection/withdrawal in response to those needs

  — Home situations in which children's mothers are physically abused by their fathers

  — The provision of extrinsic rewards or bribes aimed at eliciting "good" behavior from children.

- **Empathy instructions and training enhance affective and cognitive empathy** in both children and adults, as well as leading to **more prosocial behavior**. Specific instructional/training components shown to be related to these desirable outcomes include:

  — Training in interpersonal perception and empathetic responding—what empathy is, how it develops, how to recognize and respond to others' emotive states, etc.

  — Activities which focus initially on one's own feelings as a point of departure for relating to the feelings of others

  — Activities which focus on similarities between oneself and one's feelings and the selves and feelings of others

  — Role-taking/role-playing activities in which one imagines and acts out the role of another

  — Sustained practice in imagining/perceiving another's perspective

  — Exposure to emotionally arousing stimuli, such as portrayal of misfortune, deprivation, or distress

  — Expressions of positive trait attribution/dispositional praise; that is, reinforcing to children that positive, prosocial traits are part of their nature

  — Modeling of empathetic behavior by teachers, trainers, experimenters and

other adults with whom the child comes in contact

— Activities that focus on the lives of famous empathetic persons (e.g., Martin Luther King, Jr., Mother Theresa).

- **Empathy instruction and training** have also been shown to lead to increases in **personal openness, mindfulness of others' needs** in conflict situations, **improved teamwork**, and **greater job satisfaction**.

- **Females** exhibit **higher levels of empathy than males**; however, there is some evidence that empathy training reduces this difference.

- **Empathy and prosocial behavior increase with age**; however, empathy training has been shown to reduce the differential in empathy between very young children and older ones.

- In general, the **higher people's scores are on measures of empathy and prosocial behavior, the higher their scores on measures of critical, higher-order thinking**. Role-taking, in particular, enhances open-mindedness and reasoning capabilities.

- **Classroom strategies and program designs which are positively related to empathy and prosocial interactions** among people in general and among different racial/ethnic groups, academic ability levels, the sexes, the differently abled, socioeconomic groups, etc., include:

  — Cooperative learning structures involving learning teams made up of representatives of these various groups

  — Cross-age and peer tutoring.

- **Emotionally disturbed children exhibit greater empathy and prosocial behavior** when taught in learning environments featuring **components known to promote these qualities**—focus on how one's behavior affects others, role-taking, etc.

- Learning environments characterized by **extrinsic rewards, punishments, and behavioral charting are negatively related to the development of empathy/prosocial behavior in emotionally disturbed children**.

Conclusion

Implementation of school-controllable factors related to the development of empathy can help to lay the groundwork for the growth of other positive traits, including skill in reasoning and communication.

Attending to the development of empathetic capabilities can also respond to this report's opening question with an affirmative answer. One way of expressing this affirmation—and the one with which this investigation will conclude—is Alfie Kohn's comment on Martin Buber's statement regarding "education of character":

> He did not mean that schools should develop a unit on values or moral reasoning and glue it onto the existing curriculum. He did not mean that problem children should be taught how to behave. He meant that the very profession of teaching calls on us to try to produce not merely good learners but good people (1991, p. 497).

Key References

Barak, A.; Engle, C.; Katzir, L.; and Fisher, W. A. "Increasing the Level of Empathic Understanding by Means of a Game." *Simulation & Games* 18/4 (1987): 458-470.

Reports the results of a study to determine whether participation in an empathy training game would increase participants' empathic understanding. Participants exhibited more empathic understanding than controls.

Barnett, M. A.; Howard, J. A.; Melton, E. M.; and Dino, G. A. "Effect of Inducing Sadness about Self or Other on Helping Behavior in High- and Low-empathic Children." *Child Development* 53/2 (1982): 920-923.

Compares the altruistic behavior of sixth graders in different experimental conditions. One finding: highly empathic children who were invited to reflect upon a sad incident involving a friend engaged in significantly more helping behavior than children in other cells of the experiment.

Barnett, M. A.; King, L. M.; Howard, J. A.; and Dino, G. A. "Empathy in Young Children: Relation to Parents' Empathy, Affection, and Emphasis on the Feelings of Others." *Developmental Psychology* 16/3 (1980): 243-244.

Examines relationships between the empathy scores/behaviors of parents and the empathy scores of their 4-6-year-old children. A positive relationship was found between parents' and daughters' empathy scores.

Barnett, M. A.; Matthews, K. A.; and Howard, J. A. "Relationship Between Competitiveness and Empathy in 6- and 7-Year-Olds." *Developmental Psychology* 15/2 (1979): 221-222.

Tests the hypothesis that preparing first graders to play a game in a competitive manner would result in lower empathy scores than orienting them to play a game in a cooperative or neutral manner. No relationships were observed between kind of orientation and level of empathy.

Black, H., and Phillips, S. "An Intervention Program for the Development of Empathy in Student Teachers." *The Journal of Psychology* 112 (1982): 159-168.

Describes a program designed to increase the empathetic behavior of student teachers and compares the scores of program participants on different aspects of empathy with the scores of nonparticipants. Results were mixed.

Bonner, T. D., and Aspy, D. N. "A Study of the Relationship Between Student Empathy and GPA." *Humanistic Education and Development* 22/4 (1984): 149-154.

Reports on a study comparing the scores of secondary students on measures of empathy with their grade point averages. A significant and positive relationship was found.

Borden, L. A .; Karr, S. K.; and Caldwell-Colbert, A. T. "Effects of a University Rape Prevention Program on Attitudes and Empathy Toward Rape." *Journal of College Student Development* 29/2 (1988): 132-136.

Studies the relationship between pre- and post-participation in a rape prevention program on the attitudes toward rape and levels of empathy toward rapists and victims held by male and female students. The only significant correlation was that female students had higher empathy for rape victims than males.

Brehm, S. S.; Fletcher, B. L.; and West, V. "Effects of Empathy Instructions on First-Graders' Liking of Other People." *Child Study Journal* 11/1 (1981): 1-15.

Examines, in two experiments, the effects of "empathy instructions" on the attitudes of first graders toward characters in a story tape. Results were mixed. One finding: empathy increased when a story character experienced a negative outcome.

Clarke, P. "What Kind of Discipline is Most Likely to Lead to Empathic Behaviour in Classrooms?" *History and Social Science Teacher* 19/4 (1984): 240-241.

Reviews research on home- and school-based disciplinary practices which are associated with greater and lesser expressions of empathy on the parts of children and older youth. Draws implications for classroom practice based on findings about the efficacy of empathy training.

Dixon, D. A. "The Caring Curriculum." *School and Community* 67/4 (1980): 13-15.

Describes the purpose, activities, and outcomes of The Caring Curriculum, a program intended to foster the development of empathy in elementary students, following its implementation in schools in St. Louis and in the province of Quebec. Several beneficial effects were noted.

Eisenberg, N.; Lennon, R.; and Roth, K. "Prosocial Development: A Longitudinal Study." *Developmental Psychology* 19/6 (1983): 846-855.

Looks at relationships among prosocial moral judgment, prohibition-oriented moral judgment, and maternal child rearing practices with children of different ages. One finding: supportive, nonpunitive, nonauthoritarian child rearing practices were positively related to mature moral judgment.

Eisenberg-Berg, N., and Mussen, P. "Empathy and Moral Development in Adolescence." *Developmental Psychology* 14/2 (1978): 185-186.

Compares the empathy ratings of 72 senior high school students with their ratings on two moral development measures (moral reasoning and helping) and with parental socialization practices. A positive relationship between empathy and moral reasoning were noted for both sexes; and warm, supportive, nonauthoritarian maternal behaviors were positively related with high empathy in boys.

Hahn, S. L. "Let's Try a Positive Approach." *Foreign Language Annals* 13/5 (1980): 415-417.

Cites research indicating that students' attitudes toward foreign cultures are more positive if classroom activities begin by stressing similarities between the native and foreign culture rather than focusing on differences. Identifies and describes classroom activities that can foster cross-cultural empathy.

Haynes, L. A., and Avery, A. W. "Training Adolescents in Self-Disclosure and Empathy Skills." *Journal of Community Psychology* 26/6 (1979): 526-530.

Compares scores on measures of self-disclosure and empathic understanding of high school juniors who participated in a training program in these areas with the scores of those who did not. Experimental students significantly outperformed controls.

Herbek, T. A., and Yammarino, F. J. "Empathy Training for Hospital Staff Nurses." *Group & Organizational Studies* 15/3 (1990): 279-295.

Compares the empathy-scale scores of nurses who participated in an empathy training course with a control group and with their own pre-course scores. Results show that the training enhanced empathy.

Hinchey, F. S., and Gavelek, J. R. "Empathic Responding in Children of Battered Mothers." *Child Abuse and Neglect* 6/4 (1982): 395-401.

Compares the empathic responses of preschoolers whose fathers physically abused their mothers with the responses of children from nonabusive homes. Children of nonabusive fathers exhibited greater empathy on three of four measures.

Howard, J. A., and Barnett, M. A. "Arousal of Empathy and Subsequent Generosity in Young Children." *Journal of Genetic Psychology* 138/2 (1981): 307-308.

Compares the altruistic behavior of children in preschool through second grade in two experimental groups—those who were encouraged to think about the feelings of other, needy children and those to whom the other children's feelings were not mentioned. Children who were encouraged to think about feelings were significantly more generous.

Hughes, R., Jr.; Tingle, B. A.; and Sawin, D. B. "Development of Empathic Understanding in Children." *Child Development* 52/1 (1981): 122-128.

Compared kindergarten children with second graders in terms of their responses to slide stories of children in emotion-provoking situations. One finding: younger children's understanding of the

story-children's emotions was improved if they were first encouraged to focus on their own emotional responses.

Iannotti, R. J. "Effect of Role-Taking Experiences on Role Taking, Empathy, Altruism, and Aggression." *Developmental Psychology* 14/2 (1978): 119-124.

Examines the effects of role-taking experiences on future role taking, empathy, altruism, and aggression among boys 6 and 9 years of age. The experiences improved the role-taking ability of boys in both age groups. Altruism was increased with the 6-year-olds. Neither aggressive nor empathic behaviors was affected for any of the subjects.

Johnson, D. S.; Johnson, R.; and Anderson, D. "Social Interdependence and Classroom Climate." *The Journal of Psychology* 114 (1983): 135-142.

Compares (1) amounts of student participation in cooperative learning activities and (2) their attitudes toward these activities with their ratings on measures of classroom climate, including perceptions about support and caring from teachers and fellow students.

Kalliopuska, M. *Empathy in School Students.* Helsinki, Finland: Department of Psychology, University of Helsinki, 1983. (ED 240 423)

Compares outcomes on measures of empathy of three experimental groups and a control group of Finnish students, ages 11-18. The students exhibiting the greatest empathy were those who participated in the most intensive of three kinds of "empathy campaigns."

Kaplan, P. J., and Arbuthnot, J. "Affective Empathy and Cognitive Role-Taking in Delinquent and Nondelinquent Youth." *Adolescence* 20/78 (1985): 323-333.

Compared adolescent, delinquent boys and girls with nondelinquent boys and girls in terms of their scores on three empathy measures. Nondelinquents outscored delinquents on one of the measures; no differences were noted on the other two.

Kestenbaum, R.; Farber, E. A.; and Sroufe, L. A. "Individual Differences in Empathy Among Preschoolers: Relation to Attachment History." In *Empathy and Related Emotional Responses.* No. 44 in New Directions for Child Development series, edited by N. Eisenberg. San Francisco: Jossey-Bass, Inc., 1989.

Looks at the responses of preschool children to classmates in distress in relation to "attachment" profiles of those children when they were infants. Children who were most securely attached to their mothers as infants later exhibited the greatest amounts of empathy toward peers.

Kohn, A. "Caring Kids: The Role of the Schools." *Phi Delta Kappan* 72/7 (1991): 496-506.

Draws upon psychological and classroom research to support the contention that prosocial traits are as basic to human nature as are selfish or antisocial traits, and that prosocial classroom management and learning activities are beneficial to individuals and to society.

Kremer, J. F., and Dietzen, L. L. "Two Approaches to Teaching Accurate Empathy to Undergraduates: Teacher-Intensive and Self-Directed." *Journal of College Student Development* 32 (1991): 69-75.

Compares the "appropriate empathy" ratings of students receiving training in empathy with the ratings of controls; also compared self-directed training using programmed materials with teacher-directed training. Experimentals outperformed controls on both immediate and long-term assessments; training methods were equally effective.

Ladd, G. W.; Lange, G.; and Stremmel, A. "Personal and Situational Influences on Children's Helping Behavior: Factors That Mediate Compliant Helping." *Child Development* 54/2 (1983): 488-501.

Explores, in three experiments, relationships among several variables—age and sex of subjects, different kinds of need for help, recognition of need for help, knowl-

edge of how to help, adult exhortations to help, etc. One finding: adult encouragement to help increased helping behavior.

McDevitt, T. M.; Lennon, R.; and Kopriva, R. J. "Adolescents' Perceptions of Mothers' and Fathers' Prosocial Actions and Empathic Responses." *Youth and Society* 22/3 (1991): 387-409.

Looks at adolescents' views regarding their parents' encouragement of prosocial and empathic behavior in relation to those adolescents' scores on measures of prosocial behavior and empathy. Children of highly prosocial/empathic parents were themselves more prosocial/empathic than other adolescents.

Mills, R. S., and Grusec, J. E. "Cognitive, Affective, and Behavioral Consequences of Praising Altruism." *Merrill-Palmer Quarterly* 35/3 (1989): 299-326.

Investigates the effects of dispositional praise (attributing behavior to a positive trait), nondispositional praise, and no praise on the sharing and self-perceptions of 8- and 9-year-olds. Dispositional praise positively affected cognitive, affective and behavioral outcomes; other conditions did not. Girls were more generous than boys.

Morgan, S. R. "Development of Empathy in Emotionally Disturbed Children." *Humanistic Education and Development* 22/2 (1983): 70-79.

Compares the behavior of elementary-level emotionally disturbed children in classrooms utilizing a humanistic/psychoeducational model with the behavior of those in classrooms utilizing a behavioral/learning model. Children in the former exhibited significantly greater empathy, responsibility, and self-control.

Pecukonis, E. V. "A Cognitive/Affective Empathy Training Program as a Function of Ego Development in Aggressive Adolescent Females." *Adolescence* 25/97 (1990): 59-76.

Examines the relationship between the ego development and empathy in aggressive adolescent girls, then reports the effects of an empathy training program on these girls' levels of empathy.

Perry, D. G.; Bussey, K.; and Freiberg, K. "Impact of Adults' Appeals for Sharing on the Development of Altruistic Dispositions in Children." *Journal of Experimental Child Psychology* 32/1 (1981): 127-138.

Compares the sharing behavior of second and third graders after three different kinds of appeal: a "power-assertive" appeal emphasizing punitive consequences, an "inductive" appeal emphasizing the good feelings one gets from sharing, and a neutral appeal to share with no further commentary. The inductive appeal produced the greatest amount of sharing.

Siegal, M. "Mother-Child Relations and the Development of Empathy: A Short-Term Longitudinal Study." *Child Psychiatry and Human Development* 16/2 (1985): 77-86.

Examines relationships among gender constancy (awareness that one's gender is unchanging throughout life), gender identification, and empathy among children in first grade at two points in time. A positive correlation was noted between identification with one's mother at Time 1 and empathy score at Time 2 for both boys and girls.

Slavin, R. E. "Cooperative Learning: Applying Contact Theory in Desegregated Schools." *Journal of Social Issues* 41/3 (1985): 45-62.

Reviews research on effects of cooperative learning on cross-racial friendships and discusses findings in relation to Gordon Allport's "contact theory," a set of principles detailing when interracial contact leads to improved relationships and when it does not. Cooperative learning has been found to enhance cross-racial friendships.

Steibe, S. C.; Bolet, D. B.; and Lee, D. C. "Trainee Trait Empathy, Age, Trainer Functioning, Client Age and Training Time as Discriminators of Successful Empathy Training." *Canadian Counsellor* 14/1 (1979): 41-45.

Examines relationships among "trait" empathy, age, and other variables in a study involving Roman Catholic nuns taking part in empathy training. Younger trainees exhibited greater empathy than older ones, and trainees with greater natural empathy achieved higher scores than those with less.

Underwood, B., and Moore, B. "Perspective-Taking and Altruism." *Psychological Bulletin* 91/1 (1982): 143-173.

Presents the details and results of a meta-analysis of the research relating perspective-taking (perceptual, social, empathic, and moral) to altruism in children. Overall, a moderate but reliable positive relationship was noted.

Yogev, A., and Ronen, R. "Cross-Age Tutoring: Effects on Tutors' Attributes." *Journal of Educational Research* 75/5 (1982): 261-268.

Compares the scores on measures of empathy, altruism, and self-esteem of senior high Israeli students who served as tutors of junior high students with their own pretutoring scores and with the scores of nonparticipating schoolmates. Experienced tutors significantly outscored both their own previous levels and the nontutors on all measures.

Zahn-Waxler, C.; Radke-Yarrow, M.; and King, R. A. "Child Rearing and Children's Prosocial Initiations toward Victims of Distress." *Child Development* 50/2 (1979): 319-330.

Investigates the behavior of small children in circumstances where they were either an observer or the cause of others' distress in relation the behaviors of their mothers in similar circumstances. Empathic parenting was positively related to altruistic and conciliatory behavior by children.

General References

Batson, C. D. "How Social An Animal? The Human Capacity for Caring." *American Psychologist* 45/3 (1990): 336-346.

Discusses the notion underlying much psychological thinking and writing that no human behavior is ever truly selfless and altruistic. Describes a series of experiments that contradict this notion by demonstrating helping behavior in situations where subjects have nothing to gain by being altruistic.

Blesius, R. "The Concept of Empathy." *Psychology* 26/4 (1989): 10-15.

Discusses the general concept of empathy, various definitions, and the importance of empathy in therapeutic relationships. Provides scenarios illustrating empathic and nonempathic caregiving.

Broome, B. J. "Building Shared Meaning: Implications of a Relational Approach to Empathy for Teaching Intercultural Communication." *Communication Education* 40/3 (1991): 235-249.

Discusses the inappropriateness of applying common concepts of empathy to intercultural communications. Promotes instead the concept of "relational empathy," which allows cross-cultural communicators to develop meaning and significance together rather than seeking to understand one another's feelings and point of view.

Eisenberg, N. (ed.). *Empathy and Related Emotional Responses.* No. 44 in New Directions for Child Development series. San Francisco: Jossey-Bass, Inc., 1989.

Provides a collection of research articles on the nature and development of empathy and other prosocial qualities in young children.

Eisenberg, N., and Strayer, J. (eds.). *Empathy and its Development.* Cambridge: Cambridge University Press, 1987.

Presents a series of essays dealing with different aspects of empathy: definitions,

historical perspectives, development throughout life, empirical research findings, issues related to measurement, and other topics.

Ellis, P. L. "Empathy: A Factor in Antisocial Behavior." *Journal of Abnormal Child Psychology* 10/1 (1982): 123-134.

Compares three subcategories of delinquent male teenagers with each other and with a control group to identify relationships among delinquency, nondelinquency, and empathy. Several correlations were identified.

Gallo, D. "Educating for Empathy, Reason and Imagination." *The Journal of Creative Behavior* 23/2 (1989): 98-115.

Argues that, although empathy is sometimes thought to be an emotional response that is unrelated or possibly detrimental to reasoning, empathy in fact fosters both creative and critical thinking, and thus developing it should be adopted as an important educational goal.

Grauerholz, E., and Scuteri, G. M. "Learning to Role-Take: A Teaching Technique to Enhance Awareness of the 'Other'." *Teaching Sociology* 17/4 (1989): 480-483.

Draws upon research supporting the effectiveness of journal writing in a role-taking mode for increasing empathy to develop and describe the activities and benefits of such activities with sociology students.

Goldstein, A. P., and Michaels, G. Y. *Empathy: Development, Training, and Consequences.* Hillsdale, NJ: Erlbaum, 1985.

Discusses various definitions of empathy, outlines its development within people, identifies its component parts, and discusses its role and effects in parent-child and teacher-student relationships. Discusses training approaches to increase subjects' levels of empathy.

Jacobs D. "Successful Empathy Training." *Journal of Humanistic Psychology* 21/4 (1981): 39-56.

Reports the results of a study designed to test the author's conviction that the failure of many short-term empathy training programs to produce desirable increases in "empathic understanding" is largely a result of the way that subjects are oriented to the requirements of tasks in the studies.

Jones, B. F. "The New Definition of Learning: The First Step to School Reform." *Restructuring to Promote Learning in America's Schools. A Guidebook.* Elmhurst, IL: North Central Regional Educational Laboratory, 1990.

Provides a research-based definition of the successful learner as one whose major attributes include being knowledgeable, self-determined, strategic, and empathetic.

Kaslow, F. W. "On the Nature of Empathy." *Intellect* 105 (1977): 273-277.

Discusses differing views of empathy—in biological, sociological, and psychoanalytic theory. The role of empathy in therapeutic practice is discussed, drawing from the work of many theorists and practitioners.

McCollough, T. E. *Truth and Ethics in School Reform.* Washington, DC: Council for Educational Development and Research, 1992.

Argues that discussions of school reform and restructuring need to include attention to the moral and ethical dimensions of schooling and of life in general, in order to educate young people to be caring, contributing citizens.

Noddings, N. "Do We Really Want to Produce Good People?" *Journal of Moral Education* 16/3 (1987): 177-188.

Discusses differences between traditional male and female beliefs about goodness, arguing that feminine viewpoints have been underrepresented in our cultural understanding of moral issues. Calls for increased attention to these viewpoints and identifies implications for education.

Noddings, N. *The Challenge to Care in Schools: An Alternative Approach to Education.* Advances in Contemporary Educational Thought, Volume 8. New York: Teachers College Press, 1992.

Criticizes the American approach to public education, particularly what the author believes to be its excessive focus on developing verbal and mathematical-linear abilities. Calls for a restructuring of education focused on caring at all levels—from caring for the self to caring for other people, other species, the planet, and intangibles such as enobling ideas.

Robinson, M. G. "Awareness Program Helps Children Understand Special Needs." *Education Unlimited* 1/2 (1979): 25-27.

Describes a program designed to increase understanding of and empathy with handicapped children on the part of nonhandicapped children. Experiential activities which approximate handicapping conditions, exposure to appliances used by the handicapped, and opportunities to meet and interact with handicapped adults are featured.

Roe, K. V. "Early Empathy Development in Children and the Subsequent Internalization of Moral Values." *The Journal of Social Psychology* 110 (1980): 147-148.

Explores the relationship between children's scores on an empathy measure and their scores on a measure of internalization of moral values three years later. A significant correlation was found between high empathy and high internalization scores.

Stiff, J. B.; Dillard, J. P.; Somera, L.; Kim, H.; and Sleight, C. "Empathy, Communication, and Prosocial Behavior." *Communication Monographs* 55/2 (1988): 198-213.

Presents results of two experiments conducted to test a model of the relationship among several cognitive and affective qualities related to empathy and prosocial behavior. Results indicated that concern for others—rather than for oneself—motivates empathic concern and prosocial behavior.

Thomson, G. O. B. "Educating for Responsibility: Some Developmental Considerations." *Viewpoints in Teaching and Learning* 57/3 (1981): 13-27.

Draws upon the work of several theorists who have written about the nature of moral development and focuses on the educational implications of their work. Devotes considerable attention to the development of empathy.

Vaughn, S. "TLC—Teaching, Learning, and Caring: Teaching Interpersonal Problem-Solving Skills to Behaviorally Disordered Adolescents." *The Pointer* 31/2 (1987): 25-30.

Describes a program for behaviorally disordered senior high school students which teaches problem-solving skills as a means of increasing their social competence. Learning to develop and express a sense of empathy is a key component of the program.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Close-Up #14

Nongraded Primary Education

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Introduction

Kentucky: Legislative mandate calls for development of nongraded programs for all public school students in kindergarten through grade three.

British Columbia: Transition to universal nongraded primary education begins in 1991; mandate requires full implementation of nongraded education by the year 2000.

Oregon: State House Bill 3565 includes provisions for review of nongraded primary models and feasibility study for statewide implementation of nongraded primary education.

These and similar events reflect a keen contemporary interest in educational restructuring to improve student achievement. They also reflect a research-based conviction on the part of child development specialists and others that traditional graded school structures are detrimental to the development of young children—and that nongraded arrangements are much more in keeping with the way these children grow and learn.

Definition

Nongraded education is the practice of teaching children of different ages and ability levels together in the same classroom, without dividing them or the curriculum into steps labeled by "grade" designations (Gaustad 1992a, p.2).

Within these structures, children progress along a continuum of simple through more complex material at their own rates, making continuous progress rather than being "promoted" to the next grade at the end of a school year. Children in nongraded programs typically stay with the same teacher (or, preferably, teaching team) for two or three years. With the beginning of each new school year, one-half to two-thirds of the students from the previous year's class remain together as well, with only the oldest students entering new classes.

While students of any age can be grouped in nongraded clusters, it is nongraded *primary* instruction that is the focus of most current interest and activity. This is because research on young children (those eight years old and younger) has revealed that the educational practices most beneficial to these children can

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best be delivered—and in some cases, can *only* be delivered—in nongraded structures.

Although nongraded education has been part of the American educational scene since the beginning of the republic, many people remain confused about what it means. To some, the term "nongraded" has suggested programs in which letter grades are not given. To clarify the matter, some writers (e.g., Gaustad 1992a) have pointed out that, while alternative methods of assessing and reporting student progress are frequently used in nongraded programs, this is not the primary meaning of the term.

Further confusion has resulted from the many different terms used to designate more or less the same concept, e.g., *ungraded*, *non-age-graded*, *multiage grouping*, *mixed-age grouping*, *heterogeneous grouping*, *open education*, *vertical grouping*, and *family grouping* (Gaustad 1992a; Katz, Evangelou, and Hartman 1990; and Milburn 1981).

One also encounters the terms *multi-grade* (or *-graded*), *mixed grade*, and *split-grade*, but these generally refer to structures in which students of different ages are taught in the same classroom, but with grade-level designations maintained and separate curricula used for students in each grade. Moreover, as Craig and McLellan (1987) point out:

> Split-grade classes...respond to imbalances in pupil-teacher ratios, age-group placements, enrollment fluctuations, and budget constraints. [They] are an administrative necessity rather than a philosophical preference (p. 5).

Background

NONGRADED TO GRADED SCHOOLS

In the U.S., nongraded education was the rule until the beginning of this century—not just for primary children, but for students in general (Connell 1987). Then, factors such as increased industrial development, the large-scale movement of people to urban centers, and the influx of large numbers of immigrants, put new pressures on the schools. Miller (1989) writes, "the ideal of mass public education took root and the practice of graded schools began in earnest" (p. ix). Miller goes on:

> The graded school system was driven by a need for managing large numbers of students rather than for meeting individual students' needs [and] the graded school has survived as the dominant organizational structure since its emergence 150 years ago (p. ix).

DEVELOPMENTALLY APPROPRIATE PRACTICE AND NONGRADED EDUCATION

The rationale for nongraded primary programming rests heavily on the concept of developmentally appropriate educational practice, as this concept has emerged from the work of child psychologists and other child development specialists (Bredekamp 1987; Gaustad 1992a). Before discussing contemporary thinking about developmentally appropriate practice, however, it may be worthwhile to provide a brief summary of historical ideas about children's development and learning, and the way those ideas have been translated into practice.

Prior to the 18th century, Western writers and members of the upper classes tended to view children of five or six and older as "miniature adults" and expected them to learn in the same ways that adults do. The writings of Rousseau represented a departure from this notion, characterizing young children as moving through a succession of developmental stages, each of which governed the way that children perceive the world and learn about it (Williams 1987).

From that time forward, the approaches taken to educating young children in Europe and America have undergone considerable evolution, influenced by the work of such key figures as John Dewey, Maria Montessori, and Jean Piaget. Though these and other thinkers differed from one another in many respects, they all held to the idea that young children's ways of learning are different from those of older children or adults and that learning activities need to be responsive to the children's changing developmental needs.

In the U.S. in the late 1950s and early 1960s, major changes in our approach to educating young children began to occur. Distress over the low achievement of poor children, together with the push to "keep up with the Russians"

after the launching of the Sputnik satellite in 1957, led the federal government to intervene in early childhood educational practices in ways that continue to exert considerable influence to the present day (Williams 1987).

In the interest of improving the quality of U.S. education, many program funders and developers moved away from developmentally oriented curricula for young children and began to focus more and more on an academically oriented one. The push for young children to acquire specific skills was characterized by an increased focus on preacademic skill building, teacher-directed activity, and the introduction of abstract concepts—in other words, the kind of learning activities typically used with older children and youth. Later, and in the same spirit, the trend toward all-day kindergarten brought with it increased preacademic, cognitively oriented work for kindergarten children.

Today, there is a strong movement—involving many child development specialists, psychologists, researchers, educators, legislators, and others—calling for a return to a developmentally oriented curriculum which includes nongraded learning arrangements for primary children.

Just what is developmentally appropriate practice as it applies to the education of primary-age children? Sue Bredekamp, articulating the research-based position of the National Association for the Education of Young Children writes:

> The concept of developmental appropriateness has two dimensions: age appropriateness and individual appropriateness.
>
> 1. **Age appropriateness**. Human development research indicates that there are universal, predictable sequences of growth and change that occur in children during the first 9 years of life. These...occur in all domains of development—physical, emotional, social, and cognitive. Knowledge of typical development of children within the age span served by the program provides a framework from which teachers prepare the learning environment and plan appropriate experiences.
> 2. **Individual appropriateness**. Each child is a unique person with an individual pattern and timing of growth, as well as individual personality, learning style, and family background. Both the curriculum and adults' interactions with children should be responsive to individual differences (Bredekamp 1987, p. 2).

Many volumes have been written citing specific practices and activities that are developmentally appropriate for primary-age children, and it is outside the scope of this report to detail these here. Instead, the following list (drawn from Bredekamp 1987) identifies general characteristics of developmentally appropriate schools and programs for these children:

- **Curriculum goals** include (1) developing children's knowledge and skills in all areas (physical, social, emotional, and intellectual); (2) developing children's self-esteem and positive feelings about learning; and (3) being responsive to individual differences in developmental stage, ability, and interests.
- **Different levels** of ability, development, and learning styles are expected, accepted, and used to design curriculum.
- **Curriculum is integrated** so that children's learning in all traditional subject areas occurs primarily through projects and learning centers that are organized around themes and that reflect children's interests and suggestions.
- **Teachers plan and prepare the environment** so children can learn through active involvement with materials and with each other, with adults, and with older children serving as informal tutors.
- **Individual children or small groups** are expected to work and play cooperatively, collaboratively, or alone in learning centers and on projects that they may select themselves or be guided to by the teacher(s). Centers are changed frequently.
- **Learning materials and activities** are concrete, real, and relevant to children's lives.

- **Teachers promote prosocial behavior** through offering stimulating activities and facilitating choices.

- **Teachers involve parents** through conferences, invitations to help in classrooms, and the provision of home-based activities for parents to engage in with their children.

- **Progress is assessed** primarily through observation and recording at regular intervals; comparisons are made only with the child's own past performance, not with others. Children are actively involved in assessing their products and progress.

- **Children are neither promoted nor retained**; instead, they continually work to acquire competence in all areas.

Finally, and most relevant to the present topic, Bredekamp writes:

> Developmentally appropriate schools are also flexible in how they group children. Rigid adherence to chronological age/grade groupings or ability groupings is inappropriate....Combination classrooms or ungraded primary schools provide a vehicle for preserving heterogeneous groups while also providing more time for children to develop at their own pace and acquire early literacy and mathematical skills (p. 66).

THE RATIONALE FOR NONGRADED PRIMARY PROGRAMS

With the concept of developmentally appropriate practice as the backdrop, then, many researchers and other educators are currently calling for the use of nongraded primary school structures. The rationale (drawn from the work of Davis 1992; Hunter 1992; Milburn 1981; Calkins 1992; Miller 1992; Elkind 1989; and Purdom 1992) includes the following components:

- Chronological age and mental age do not always correspond.

- A child may excel in one curricular area and simultaneously have difficulty in another.

- Children are able to work at different developmental levels without obvious remediation, thus avoiding the social or emotional damage typically caused by retention.

- Students stay with their teacher(s) for more than one year; thus teachers get to know students well and provide for continuity in their learning, and children avoid the trauma of adjusting to new teachers annually.

- Children have more time to assimilate and consolidate learnings in a familiar environment.

- Age and achievement differences are accepted as normal by children.

- Nongraded arrangements lend themselves to integrated curriculum.

- Nongraded grouping lends itself to the use of validated practices such as cooperative learning and cross-age tutoring.

- The increasing diversity of contemporary society is more easily accommodated by nongraded programs.

- Research shows that nongraded grouping leads to more positive student attitudes and behavior than graded structures and that achievement outcomes are similar.

- The team teaching and family-like atmosphere typical of nongraded programs leads to increased job satisfaction for teachers.

In addition, proponents note that nongraded programming is more in keeping with the way children in naturalistic settings spontaneously group themselves for play and projects. Researchers (such as Day and Hunt 1975; Ellis, Rogoff, and Croner 1981; Gaustad 1992a; and Pratt 1986), have found that, given the opportunity, children will select friends, playmates, and groupmates of a wide age range and interact with them more successfully than they do with peers in same-age groups.

In citing the benefits of nongraded programs, proponents also point to the drawbacks of

graded structures. Some of these, such as the affective damage caused by retention in grade, have been referenced. Connell (1987) writes further of the poor fit between graded programs and the reality of children's developmental differences:

> In most American schools today, by third grade most classroom rosters will reveal a spread of 3 years, not 12 months. Along the way some children have been retained, and some accelerated. Both decisions result in trauma for the individuals involved (p. 37).

In a stirring call for educational redesign to meet the real needs of real children, Cuban (1989) writes:

> One of the most inflexible of the structures of schooling is the graded school. The graded school categorizes, segregates, and, as a last resort, eliminates those whose performance and behavior deviate too sharply from the norm... The implicit theory underlying the graded school is that educational quality comes through uniformity.
>
> ...the graded school unintentionally worsens [the] social disadvantages [of poverty and racism] by branding students for the duration of their careers through the mechanisms of separate classes and programs (p. 782).

And Goodlad and Anderson (1987) summarize the drawbacks of the graded school structure, stating that:

> The simple fact is that a literally graded approach to instruction does not work, and teachers and administrators must constantly subvert it in order to deal with the realities of individual differences. Compromise, invention, adaptation, and thoughtful disregard for grade-level standards are invariably practiced in graded schools, even though many teachers probably do not realize fully how unfaithful to gradedness they find it necessary to be in their daily work with children (p. xxvi).

The Research Literature

-NATURE OF THE RESEARCH

The rationale for implementing nongraded primary education comes largely from two research bases: (1) the research on child development and learning, which we have been discussing; and (2) the empirical research on the effects on children of graded and nongraded structures, which is detailed in this section.

This report is the result of an analysis of forty-six documents, many of which address more than one topic. Nine of them discuss the research on child development and learning, and eleven focus on related matters, such as critiques of graded programs, descriptions of nongraded programs, guidelines for program planning and operation, and resistance/obstacles to implementing nongraded programs. Twenty-six of the documents report the results of empirical research on the effects of nongraded grouping.

The general observation has been made that empirical research supports the use of nongraded programs. The specific nature and weight of the research evidence is detailed in the following paragraphs.

Of the twenty-six reports of research on the effects of nongraded grouping, fifteen are studies, nine are reviews, one presents the results of both a review and a series of case studies, and one is described as a "best evidence synthesis." Twenty-one of the reports focus on the effects of nongraded grouping, while five are concerned with mixed grade structures.

The subjects of the research include children of preschool/kindergarten ages (two reports), primary school ages (five), primary and older elementary ages (sixteen), and the entire elementary-secondary range (three). The subjects represent a wide range of racial/ethnic and socioeconomic groups in the U.S. and Canada.

Nearly all of the reports are concerned with the comparative effects of graded and nongraded structures on children's achievement and/or attitudes and/or social behavior.

Eighteen of the reports focus on children's academic achievement in the two kinds of settings, as measured by standardized tests, local tests, or school grades.

Effects on student attitudes were examined in eleven of the research documents; specifically, these reports focused on attitudes toward school, self as a learner, and classmates. Other attitudinal areas of concern in the research are general self-esteem, future aspirations, and level of anxiety.

Behavioral outcomes were investigated in nine of the research reports; these variables include social and leadership skill development, interaction with other-age peers, prosocial behavior, attendance, and dropout rate.

Other outcome areas examined are retention, teacher-student relations, and parent attitudes.

RESEARCH FINDINGS

Achievement. Some investigations—and particularly recent ones (e.g., Gutierrez and Slavin 1992; Anderson and Pavan 1992)—favor nongraded grouping, and a few favor graded arrangements. Most of the research reviewed in preparation for this report, however, reveal no significant achievement differences. This finding was obtained regardless of the kind of achievement measures used and in various content areas—reading, vocabulary development and other language arts, mathematics, and science. (Brown and Martin 1989; Eames 1989; Johnson, et al. 1985; Katz, Evangelou, and Hartman 1990; KEA/AEL 1991; Milburn 1981; Miller 1990; Mobley 1976; Pratt 1986; Rule 1983; Schrankler 1976; and Way 1981)

Way writes:

> Multiage grouping skeptics have generally expressed concern that achievement would suffer if children of different ages were to be grouped in a multiage classroom. The results from both this study and previous studies indicate that such concern may be unwarranted. Achievement in multiage classrooms appears to be no different from achievement in single-age classrooms (1981, p. 74).

Attitudes. Research overwhelmingly favors nongraded grouping because of its positive effects on:

- **Attitude toward school** (Anderson and Pavan 1992; Ford 1977; KEA/AEL 1991; Milburn 1981; Miller 1990; Pavan 1977, 1992; Pratt 1986; Schrankler 1976)
- **Self-concept as a learner** (Anderson and Pavan 1992; Ford 1977; Johnson, et al. 1985; KEA/AEL 1991; Miller 1990; Mobley 1976; Pavan 1977, 1992; Pratt 1986; Schrankler 1976; Way 1981)
- **Classmates** (KEA/AEL 1991; Miller 1990; Pavan 1977)
- **Self-esteem** (Anderson and Pavan 1992; Johnson, et al. 1985; KEA/AEL 1991; Pavan 1992)
- **Anxiety** (Papay, et al. 1975; Katz, Evangelou, and Hartman 1990)
- **Future aspirations** (Ford 1977).

Pavan's analyses of longitudinal data also revealed that the longer students are in nongraded programs, the more positive their school-related attitudes become.

Behavior. Compared with children in graded settings, those in nongraded programs exhibited more positive outcomes in the following areas:

- **Social skill development**, particularly improvements in social skills on the parts of socially withdrawn older children in nongraded settings (Furman, Rahe, and Hatrup 1979; Katz, Evangelou, and Hartman 1990; Pratt 1986; Winsler and Espinosa 1990)

  Furman, Rahe, and Hatrup (1979) found that:

  > Improvement among the isolate children who were exposed to younger children was so marked that posttreatment interaction was almost twice as frequent as pretreatment interaction—essentially at the same level as the social interaction of the nonisolate children (p. 920).

- **Leadership skill development** of older children (Katz, Evangelou, and Hartman 1990; Furman, Rahe, and Hatrup 1979)

- **Frequency of interaction with other-age peers** (Day and Hunt 1975; Ellis, Rogoff, and Cromer 1981; Way 1979; Winsler and Espinosa 1990)

  Researchers note, however, that teachers sometimes interfere with cross-age interactions, either by conducting too many teacher-directed activities or by putting children in age-similar groups too much of the time.

- **Prosocial behaviors/reduced aggression** among students, such as giving, sharing, taking turns, giving praise and reassurance, etc. (Katz, Evangelou, and Hartman 1990; Katz and McClellan 1991; KEA/AEL 1991; Pratt 1986; Roopnarine and Johnson 1984; Winsler and Espinosa 1990)

  Pratt writes:

  > Children's friendships, both in classrooms and in naturalistic settings, have been one theme of the multiage research. The general picture that emerges from these studies is one of increased competition and aggression within same-age groups and increased harmony and nurturance within multiage groups (1986, p. 112).

- **Attendance** (Pavan 1977; Schrankler 1976).

Other Outcomes. Nongraded programs lead to more positive outcomes regarding:

- **Retention**—Children educated in nongraded settings move through the curriculum more expediently (KEA/AEL 1991; Pavan 1977, 1992)

- **Teacher-student interactions** (KEA/AEL 1991; Winsler and Espinosa 1990)

- **Parent attitudes** toward school and their children's learning (KEA/AEL 1991; Katz, Evangelou, and Hartman 1990; Schrankler 1976).

Obstacles to the Transition to Nongraded Primary Programs

"In view of the advantages to ungraded instruction cited in the literature, the reader may wonder why more school districts have not moved to ungraded organization sooner." This observation, made in a 1991 collaborative report by the Kentucky Education Association and the Appalachia Educational Laboratory, concerns many researchers and educators. These investigators (e.g., Gaustad 1992; Cuban 1989; writers of the KEA/AEL report, etc.) have identified the following barriers to the implementation of nongraded programs:

- From a strictly organizational and logistical point of view, **graded structures are relatively efficient and inexpensive.**

- Because they work well for some students, **many people believe that graded programs are effective** in general.

- **Parents and community members frequently lack understanding** of the nongraded education concept and its advantages.

- **Teachers** are normally trained only in methods for teaching single-grade classes and are **resistant to change.**

- **Teachers often fear** that teaching nongraded classes will require **more preparation time** and a **larger repertoire of instructional methods and materials** than teaching single-grade classes.

- **Lack of administrative support** has frequently thwarted attempts to move to nongraded structures.

- **The textbook industry** structures its wares for use in traditional, single-grade classes. In addition, textbook content is typically aimed at the lowest common denominator, and as such, it encourages conformity and is unresponsive to the ranges of abilities found in groups of children.

- **Standardized testing methods** are also designed for use with students educated in single-grade arrangements.

- **The "back-to-basics" movement** of the 1970s and 1980s led to greater rigidity in education.

Some researchers (e.g., Gaustad 1992a) point out that some of the resistance to nongraded programs must be laid at the door of previous, poorly handled attempts to implement them. Many of the "open education" programs of the 1960s and early 1970s were said to be nongraded, but were not true nongraded structures. In addition, these approaches were not clearly explained to parents and community members, who often perceived them negatively. Attempts to implement nongraded programs without providing either theoretical understanding or practical training for teachers have also led to program failure in the past.

Current proponents argue that American public education is now in a much better position to move toward nongraded programming than at any time in the past. This, they say, is because:

- We have a **much more extensive research base** than ever before on child development/learning and on the benefits of nongraded programs.

- **Research findings** regarding cooperative learning, peer tutoring, ability tracking, and grade retention all **point to the superiority of nongraded** over graded educational settings.

- There is more widespread **understanding of** the conceptual model of **developmentally appropriate practice**.

- We understand more about the **change process** and have better ways to support school people as change is being implemented.

- Nongraded programs are appropriate and perhaps even essential for responding to the **increasing diversity in the U. S. population**.

- **Educators and the public have become more open to the concept of nongradedness**. Goodlad and Anderson (1987) write:

> The aggressive advocacy of the self-contained classroom that was common several decades ago is much less in evidence today (p. xxvii).

Recommendations

In view of the overwhelming research evidence in support of nongraded primary education, virtually every writer whose work was consulted in preparation of this report advocates widespread implementation of this practice. Specific information to assist school staffs with planning and implementation are cited below and are drawn from the work of Davis (1992); Gaustad (1992a, b); Hunter (1992); Katz, Evangelou, and Hartman (1990); KEA/AEL (1991); Bredekamp (1987); and Elkind (1989).

- **Planners** (at all levels). Planners should examine a variety of different nongraded programs and select from them the elements best suited to the needs of their particular school and community.

- **State legislators**. These lawmakers should take action to remove impediments to implementing and operating nongraded programs—impediments such as requiring the use of standardized testing and textbook series organized on a grade-level basis.

- **District administrators**. Central office staff should take action to reduce the pressure exerted by grade-level textbooks and standardized testing procedures, so long as these remain in force.

- **Principals**. Principals and other school-level administrators should provide support for the nongraded program concept by allowing time for planning, decision making, and the ongoing preparation needs of teachers under this time-intensive arrangement.

- **Teachers**. Teachers should be provided with training and support for understand-

ing developmentally appropriate educational practices and in implementing nongraded programs.

- **Parents and community members.** Parents and community should be informed about the benefits of nongraded primary programs so as to engage their interest and support. Including parents and community representatives in program planning from the beginning will facilitate communication and build goodwill.

- **Implementation.** Implementation should be gradual but continuous. Gaustad (1992b, p. 5) speaks for proponents of nongradedness in general when she writes, "Adding a few new elements at a time generally works better than attempting to change the entire structure at once." On the other hand, if changes happen too slowly, momentum will be lost and full transition to nongradedness may never happen.

- **Class composition.** There is no one best way to mix ages. Currently used arrangements include K-2 and 1-3, K-3, and overlapping groups. Some settings deliberately mix by ability, race/ethnicity, gender, special/regular education, etc. Others mix by random assignment.

- **Team teaching.** Experts on nongraded primary programming strongly recommend the use of teaching teams. Research shows that children benefit greatly from experiencing the strengths of multiple teachers.

- **Classroom organization/materials.** "The concepts of active, hands-on learning and flexible grouping determine the physical organization of the nongraded classroom," writes Gaustad (1992a, p. 23). Basic elements include learning centers, tables of manipulatives, library corner, sand table, etc. Textbooks such as basal readers may be used, but they are not central to the program.

- **Flexible grouping.** "Even the greatest supporters of mixed-age and mixed-ability grouping agree some curricula are most effectively taught to children of similar experience and achievement" (Gaustad 1992a, p. 24). Basic reading and arithmetic subskills are principal examples. Cooperative projects lend themselves to heterogeneous grouping.

- **Integrated curriculum.** Organizing traditional learning content around themes and utilizing whole-language approaches are most in keeping with the developmental levels of primary children. Learning should take place in a context meaningful to children; be relevant to their lives; and allow them to take active roles, engage in many self-selected activities, and utilize multiple mind/body functions.

- **Assessment/evaluation.** Narrative descriptions of student progress, collections (portfolios) of children's work, conferences with parents and children, and comparing progress with general norms (not other students) are appropriate assessment methods. To a man or woman, early childhood specialists recommend against overreliance on standardized test results.

With these research findings and guidelines to support their work, legislators, educators, and the general public can undertake a meaningful transition from traditional age/grade structures to nongraded arrangements for primary children. The reasoning behind such a transition is simple and compelling. As expressed by Pratt (1986, p. 112):

> The evidence on multiage grouping appears to confirm the basic principle that diversity enriches and uniformity impoverishes.

Key References

Anderson, R. H., and Pavan, B. N. *Nongradedness: Helping It to Happen*. Lancaster, PA: Technomic Publishing Company, Inc., 1992.

Defines and cites research in support of nongraded grouping, followed by a detailed discussion of curriculum, instructional practices, and assessment methods congruent with nongradedness. Details the roles

of educational personnel, parents, and community members, and offers guidelines for making the transition to nongraded school organization.

Brown, K. S., and Martin, A. G. "Student Achievement in Multigrade and Single Grade Classes." *Education Canada* 29/2 (1989): 10-13, 47.

Compares the achievement of students in multi-grade and single-grade classes in eight elementary schools in New Brunswick, Canada. No significant differences were found.

Day, B., and Hunt, G. H. "Multiage Classrooms: An Analysis of Verbal Communication." *The Elementary School Journal* 75/7 (1975): 458-464.

Analyzes the patterns and frequency of interaction across age groups among four- to seven-year-olds in four early childhood education settings. Major finding: most cross-age interaction occurred when teachers were not present; teacher-directed learning activities tended to segregate children by age.

Eames, F. H. *A Study of the Effectiveness of Instruction in Multi-Age Grading vs. Traditional Single-Grade Organization on the Reading Achievement of Fourth Graders*. Danbury, CT: Western Connecticut State University, 1989. (ED 309 388)

Compares the reading achievement scores of fourth graders instructed in a traditional, single-grade setting with those in a combined fourth and fifth grade class in which grouping cut across age and grade levels. No significant differences were found.

Ellis, S.; Rogoff, B.; and Cromer, C. C. "Age Segregation in Children's Social Interactions." *Developmental Psychology* 17/4 (1981): 399-407.

Reports the results of an observational study undertaken to determine what ages of companions children one to twelve years old select for play and other spontaneous social interaction. When the children were not by themselves or with adults, they were with older or younger children during 55 percent of the observations and with same-age peers during only 6 percent.

Ford, B. E. "Multiage Grouping in the Elementary School and Children's Affective Development: A Review of Recent Research." *The Elementary School Journal* 78/2 (1977): 149-159.

Reviews research on the effects of multiage grouping on such affective variables as attitude toward school, self-concept as a learner, and self-esteem. Findings indicate that multiage grouping produces more positive affective outcomes than traditional single-age grouping.

Furman, W.; Rahe, D. F.; and Hatrup, W. W. "Rehabilitation of Socially Withdrawn Preschool Children through Mixed-Age and Same-Age Socialization." *Child Development* 50/4 (1979): 915-922.

Compares the incidence of positive social interaction on the part of socially withdrawn preschoolers as a result of play sessions with a same-age partner, with a younger partner, or no treatment. Experimental children paired with a younger partner exhibited significantly higher levels of social interaction following the sessions; others did not.

Gaustad, J. "Nongraded Education: Mixed-Age, Integrated, and Developmentally Appropriate Education for Primary Children." *OSSC Bulletin* 35/7 (March 1992): entire issue.

Provides definitional and historical information about nongraded education practices, cites drawbacks to graded structures, summarizes research on graded and nongraded programs, and provides suggestions for those wishing to implement nongraded primary programs.

Gutierrez, R., and Slavin, R. E. "Achievement Effects of the Nongraded Elementary School: A Best-Evidence Synthesis." *Review of Educational Research* 62/4 (1992): 333-376.

Uses the "best-evidence synthesis" method to analyze 57 studies of the achievement

effects produced by nongraded elementary programs. Beneficial effects were noted for single-subject and comprehensive multiage arrangements, but individualized programs showed inconsistent effects.

Johnson, D. W.; Johnson, R.; Pierson, W. T.; and Lyons, V. "Controversy Versus Concurrence Seeking in Multi-Grade and Single-Grade Learning Groups." *Journal of Research in Science Teaching* 22/9 (1985): 835-848.

Studies the effects of kind of grouping and structure of learning activity on various outcomes for fourth, fifth, and sixth graders. Among the findings: students in multi-age settings had higher learning self-efficacy scores and motivation; no differences in achievement or interpersonal relations were noted.

Katz, L.; Evangelou, D.; and Hartman, J. *The Case for Mixed-Age Grouping in Early Education*. Washington, DC: National Association for the Education of Young Children, 1990.

Argues that both the nature of child development and the evidence from anthropological study support mixed-age grouping for early child education. Reviews research on the achievement and particularly affective outcomes of mixed-age grouping, and discusses cross-age tutoring and cooperative learning as effective strategies for mixed-age groups.

Kentucky Education Association and Appalachia Educational Laboratory. *Ungraded Primary Programs: Steps Toward Developmentally Appropriate Instruction*. Washington, DC: CEDaR, April 1991.

Presents findings from a literature review on ungraded primary instruction followed by findings emerging from case studies of 10 such programs in the state of Kentucky. Also cites obstacles to the implementation of ungraded primary programs and offers recommendations to those considering beginning these programs.

Milburn, D. "A Study of Multi-Age or Family-Grouped Classrooms." *Phi Delta Kappan* 3/81 (1981): 513-514.

Compares the effects of multi-age grouping and traditional grade-level grouping on the academic performance and attitudes of children 6-11 years of age. Academic outcomes were similar; children in multi-age groupings had more positive attitudes than those in traditional structures.

Miller, B. A. "A Review of the Quantitative Research on Multigrade Instruction." *Research in Rural Education* 7/1 (1990): 1-8.

Examines the quantitative research literature on the effects of multigrade classroom structures on student cognitive and affective outcomes. Compared to students in single-grade settings, those in multigrade classes had more positive attitudes toward self, school, and schoolmates. Achievement outcomes were similar.

Mobley, C. F. *A Comparison of the Effects of Multiage Grouping Versus Homogeneous Age Grouping in Primary School Classes of Reading and Mathematics Achievement*. Practicum Report. Ft. Lauderdale, FL: Nova University, April 1976. (ED 328 102)

Investigates the effects of single-age and multi-age grouping on the reading and math achievement and self-concepts of children in their first, second, and third years of school. Results were mixed on the math and reading measures; self-concept scores significantly favored multi-age grouping.

Papay, J. P.; Costello, R. J.; Hedl, J. J., Jr.; and Speilberger, C. D. "Effects of Trait and State Anxiety on the Performance of Elementary School Children in Traditional and Individualized Multiage Classrooms." *Journal of Educational Psychology* 67/6 (1975): 840-846.

Compares the task performance and anxiety levels of first and second graders in traditional, grade-level groupings with those of age peers in multiage classes. Multiage-grouped subjects had lower anxiety than traditionally grouped students, and multiage-grouped second graders evidenced superior task performance as well.

Pavan, B. N. "The Benefits of Nongraded Schools." *Educational Leadership* 50/2 (1992): 22-25.

Presents results of a review of 64 research documents on the effects of nongraded programs on student achievement, mental health indicators, attitudes, and particular populations. Nongraded programming compared favorably with single-grade grouping on all of the measures considered. Data are also reported in Anderson and Pavan (1992) above.

Pavan, B. N. "The Nongraded Elementary School: Research on Academic Achievement and Mental Health." *Texas Tech Journal of Education* 4/2 (1977): 91-107.

Reviews 37 comparative research studies on nongraded elementary instruction versus traditional grade-level groupings. Students in nongraded settings significantly outperformed controls on measures of academic achievement, attitudes, self-concept, attendance, and other outcomes.

Pratt, D. "On the Merits of Multiage Classrooms." *Research in Rural Education* 3/3 (1986): 111-115.

Discusses sociological and anthropological findings about the ways people and animals organize themselves into age groupings and reviews research on the comparative achievement and affective outcomes of single-age and multiage learning environments.

Roopnarine, J. L., and Johnson, J. E. "Socialization in a Mixed-Age Experimental Program." *Developmental Psychology* 20/5 (1984): 828-832.

Examines the social interactions of children three to eight years old in an early childhood education program. Children of different ages made different choices regarding the age groups of classmates with whom they chose to interact. No firm conclusions were drawn.

Rule, J. G. *Effects of Multigrade Grouping on Elementary Student Achievement in Reading and Mathematics*. Mesa, AZ: Department of Research and Evaluation, May 1983.

Compares the reading and mathematics achievement of third through sixth graders in multigrade classes with the achievement of those instructed in single-grade classes. No significant differences were found on eleven of twelve comparisons.

Schrankler, W. J. "Family Groupings and the Affective Domain." *The Elementary School Journal* 76/7 (1976): 432-439.

Compares the self-concepts, attitudes toward school, and academic achievement levels of three groupings of elementary children: complete multiage, restricted multiage, and unit-age. Results showed affective differences favoring the multiage structures and no achievement differences.

Way, J. W. "Achievement and Self-Concept in Multiage Classrooms." *Educational Research Quarterly* 6/2 (1981): 69-75.

Compares the achievement and self-concept scores of children six to ten years old in multiage learning environments with those in single-grade environments. No achievement differences were found; self-concept scores favored the multiage structure, especially on the factor of "happiness and satisfaction."

Way, J. W. "Verbal Interactions in Multiage Classrooms." *The Elementary School Journal* 79/3 (1979): 178-186.

Examines children's interactions in elementary multiage classes in two schools to identify patterns. Among the findings: in three-year age-span classes, interaction across age groups is infrequent, and older children do not give assistance and advice any more often than younger ones.

Winsler, A., and Espinosa, L. *The Benefits of Mixed-Age Grouping in Early Childhood Education: A Report to the Redwood City School Board on the Primary Education Center's Mixed-Age Summer School Pilot Program*. Redwood City, CA: Redwood City School District, November 1990.

Reports results of a study comparing the effects on kindergarten-age children in a mixed-age summer program with those in

a conventional kindergarten program. Children in the mixed age group exhibited more positive outcomes on all measures.

General References

Bredekamp, S. (ed.) *Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8—Expanded Edition*. Washington, DC: National Association for the Education of Young Children, 1987.

Cites research findings about the importance of matching early childhood program content to the age and developmental levels of children in those programs. Provides considerable detail about the range of developmentally appropriate practices for children of different age groups.

Calkins, T. "The Track: Children Thrive in Ungraded Primary Schools." *The School Administrator* 49/5 (1992): 9-13.

Discusses the congruence between multiage classroom grouping and what is known about the developmental process and needs of young children. Gives overviews of school restructuring in two schools in British Columbia.

Connell, D. R. "The First 30 Years Were the Fairest: Notes from the Kindergarten and Ungraded Primary (K-1-2)." *Young Children* 42/5 (1987): 30-39.

Traces the history of early childhood education in the U. S. during the past 60 years and laments the trend toward more academically oriented, rigidly structured programming during the past 30 years. Offers a description of her positive experiences in one-room and ungraded school settings.

Craig, C., and McLellan, J. "Split Grade Classrooms: An Educational Dilemma." *Education Canada* 27/4 (1987): 4-9.

Discusses the phenomenon of split-grade classrooms, especially as these are utilized in Canada. Distinguishes between split-grade and other multi-age arrangements, presents the results of a teacher survey about split-grade structures, and offers recommendations to educators who are or will be using split-grade arrangements.

Cuban, L. "The 'At-Risk' Label and the Problem of Urban School Reform." *Phi Delta Kappan* 70/10 (June 1989): 780-784, 799-801.

Argues that graded school structures help to create and perpetuate problems for so-called "at-risk" students. Cites obstacles to redesigning schools, but offers steps that schools and individual teachers can take to improve the quality of education, especially for those labeled as "at risk."

Davis, R. *The Nongraded Primary: Making Schools Fit Children*. Arlington, VA: American Association of School Administrators, 1992.

Discusses the nature of nongraded primary grouping, the rationale for implementing it, role changes that take place when schools make the transition to nongraded primary, appropriate teaching strategies, and suggestions for those wishing to change to a nongraded arrangement. Contains excerpts from many resources on nongraded grouping.

Elkind, D. "Developmentally Appropriate Practice: Philosophical and Practical Implications." *Phi Delta Kappan* 71/2 (1989): 113-117.

Contrasts the dominant "psychometric" philosophy of education with the "developmental" concept in terms of their differing views of learners, the learning process, the nature of knowledge, and the goals of education. Draws implications of the developmental view, which he favors.

Gaustad, J. "Making the Transition from Graded to Nongraded Primary Education." *OSSC Bulletin* 35/8 (April 1992): entire issue.

Cites validated elements of successful change from graded to nongraded systems; discusses the educational change process; describes transitions to nongraded struc-

tures at the single site, district, and state levels; and presents implications for school boards.

Gayfer, M. (ed.). *The Multi-grade Classroom: Myth and Reality - A Canadian Study.* Toronto, Ontario: The Canadian Education Association, 1992.

Summarizes the results of a study undertaken to determine the prevalence of, reasons for, and advantages/disadvantages of multi-grade classrooms in Canada. One finding: enrollment, budgeting, and other administrative concerns—not pedagogical ones—are the main reasons for organizing multi-grade classes.

Goodlad, J. I., and Anderson, R. H. *The Nongraded Elementary School. Revised Edition.* Reissued with a New Introduction. New York: Teachers College Press, 1987.

Presents the original 1959/1963 text of this book, with newly prepared introductory material which sets a contemporary context for the theory of, arguments for, and descriptions of the operation of nongraded elementary education.

Hunter, M. *How to Change to a Nongraded School.* Alexandria, VA: Association for Supervision and Curriculum Development, 1992.

Raises and addresses issues that schools face when undertaking the challenge of changing to nongraded grouping—issues related to school organization, student placement, instructional design, program assessment, communication with parents, and preparation of teachers to teach mixed-age classes. Includes a case study of one school's transition to nongraded grouping.

Katz, L. G., and McClellan, D. E. *The Teacher's Role in the Social Development of Young Children.* Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education, 1991.

Cites research indicating that failure to achieve minimal social competence in early childhood is linked to maladaptive behavior later in life. Provides general guidelines and specific strategies teachers can use to foster healthy social development in young children.

Miller, B. A. *The Multigrade Classroom: A Resource Handbook for Small, Rural Schools.* Portland, OR: Northwest Regional Educational Laboratory, 1989.

Presents findings from research on multigrade settings (reprinted in Miller 1990 and 1991) and offers information and guidelines for use by teachers of multigrade classes in the areas of classroom organization, management, grouping, instruction, and others.

Miller, B. A. "A Review of the Qualitative Research on Multigrade Instruction." *Journal of Research in Rural Education* 7/2 (1991): 3-12.

Provides an overview of the problems and needs of rural teachers in multigrade classrooms and reviews studies detailing how instruction is conducted in multigrade classes. Draws implications for teacher preparation, classroom organization, and student learning.

National Association for the Education of Young Children, and the National Association of Early Childhood Specialists in State Departments of Education. "Position Statement: Guidelines for Appropriate Curriculum Content and Assessment in Programs Serving Children Ages 3 Through 8." *Young Children* 46/3 (1991): 21-38.

Offers a rationale for proferring guidelines for the education young children, reviews the major concepts of developmentally appropriate practice, offers a series of 20 guidelines for developing curriculum, and provides suggested assessment procedures for regular and special needs students

Pavan, B. N. *Moving Elementary Schools Toward Nongradedness: Commitment, Assessment, and Tactics.* 1991 Revision. Philadelphia, PA: Temple University, 1991.

Itemizes the principles of nongradedness in the form of a survey instrument for respondents to use to indicate their

opinions about the relative importance of these principles. Topical clusters include goals, organization, curriculum, instruction, materials, and assessment.

Purdom, D. M. "Experience with Nongrading: A Personal Reflection." *Wingspan* 8/1 (1992): 28-35.

Describes the author's experience working in an innovative nongraded school in Kentucky in the 1960s and draws implications for nongraded education in the 1990s and beyond. Builds on the principles discussed in his 1972 article (see next entry).

Purdom, D. M. "The Ideal Nongraded School." *Orbit* 3/4 (1972): 4-7.

Points out that there are many concepts and definitions of the nongraded school and that these have led to confusion. Offers and comments on a conceptual model of the nongraded school as a means of clarifying the meaning and purpose of this educational approach.

Shepard, L. A., and Smith, M. S. "Synthesis of Research on Grade Retention." *Educational Leadership* 47/8 (1990): 84-88.

Summarizes research on the incidence and cost of retention in grade and on the effect of retention on achievement, dropout rates, and student affect. Concludes that the effects of retention are overwhelmingly negative and encourages alternatives to its use.

Williams, L. R. "Determining the Curriculum." Chapter 1 in Seefeldt, C. (ed.). *The Early Childhood Curriculum: A Review of Current Research*. New York: Teachers College Press, 1987, 1-12.

Provides an overview of the evolution of Western thinking, from the early 18th century to the present, about the way that young children should be educated. Favors the view that the developmental level of young children calls for a "whole child" approach rather than a cognitively oriented, preacademic one.

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Snapshot #25

Building Positive Student Self-Concept

Stevenson-Carson School District
Stevenson, Washington

Kathleen Cotton

Research Findings

"Goal #1: Students will have a positive self-concept."

When the staff and community of the Stevenson-Carson School District established this goal and gave it top priority, they were responding to three influences:

- Widespread agreement in the school and community that positive student self-concept is of primary importance
- District data indicating that improvement was needed in this area
- Research data showing the critical importance of a positive self-concept for success in school and in life.

Focusing on the support provided by research, it can readily been seen that many effective educational practices are typically in operation in schools and districts whose students have positive self-regard. The document, *Effective Schooling Practices: A Research Synthesis/ 1990 Update* (Northwest Regional Educational Laboratory, April 1990), identifies the following practices as being particularly relevant to enhancing student self-concept:

At the **classroom** level:

1.2.1 Instructional Groups Formed in the Classroom Fit Students' Academic and Affective Needs

1.3.4 Students Routinely Receive Feedback and Reinforcement Regarding Their Learning Progress

1.4.1 There are High Expectations for Student Learning

1.4.3 Personal Interactions Between Teachers and Students are Positive

1.6.1 Students at Risk of School Failure are Given the Extra Time and Help They Need to Succeed.

At the **school** level:

2.1.1 Everyone Emphasizes the Importance of Learning

2.2.4 There are Pleasant Conditions for Teaching and Learning

2.4.2 Incentives and Rewards are Used to Build Strong Student and Staff Motivation

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
Telephone (503) 275-9500

School Improvement Program

2.6.1 Students at Risk of School Failure are Provided Programs to Help Them Succeed

2.7.1 Parents and Community Members are Invited to Become Involved.

At the **district** level:

3.1.1 High Expectations Pervade the Organization

3.1.2 There are Policies and Procedures that Support Excellence In Student Performance

3.4.1 Improvement Efforts are Encouraged, Supported, and Monitored.

Situation

The Stevenson-Carson School District is a consolidated district made up of many small communities. Located in the "windsurfing capital of the world"—the Columbia River Gorge—the district serves approximately 1100 students in two elementary schools, a middle school, and a high school. Some 95 percent of Stevenson-Carson's students are white/non-Hispanic. The teacher-student ratio is one to twenty-three or less at all grade levels.

Skamania County, in which the school district is located, has had the highest unemployment in the state of Washington for a number of years, due primarily to the general decline in the logging and wood products industries in the Pacific Northwest. While the unemloyment rate over the last ten years has averaged approximately 15 percent, at this writing it has reached nearly 30 percent. Other developments, such as a recently erected convention center and the designation of the Columbia Gorge as a National Scenic Area, are expected to reinvigorate the local economy, but their effect has not yet been significantly felt.

Context

BELIEFS ABOUT EDUCATIONAL IMPROVEMENT

When Stevenson-Carson superintendent Tony Feldhausen became aware of NWREL's strategic improvement process, *Creating the Future* (CTF), central office and school-level staff in his district were already engaged in research-based school improvement projects and had undertaken some of the components of strategic planning. Feldhausen and special programs supervisor Mollie Lopshire had, for example, provided Teacher Expectations and Student Achievement (TESA) training to a number of the district's teachers. They had provided classes in the development of collaborative staff relationships, cooperative learning, and the use of research-based practices in lesson design. Small grants were also offered by the district for teachers to develop and improve these practices in their own areas of responsibility. The district had provided staff development activities for instructional assistants as well. In addition, administrators and teachers had been involved in direction setting, visioning, studying the change process, and reviewing/sharing research on effective schooling practices.

Reading a journal article about the CTF process, Tony Feldhausen saw a high degree of congruence between CTF and his district's current efforts. And since he and his staff wanted to take a more structured and systematic approach to districtwide school improvement, Feldhausen contacted NWREL and, together with supportive staff and community members, embarked on the CTF approach to districtwide school improvement.

Why did Stevenson-Carson stakeholders feel the CTF process was right for the district? The answer lies in the following list of philosophical and procedural features, which characterize both the district's direction and the CTF strategic improvement approach:

- All stakeholder groups in the district—board members, administrators, teachers, noncertified staff, parents, other community members, and students—should have a voice in planning and decision making.

- The improvement process should be led by a team responsible for guiding the effort, engaging the participation of school and community people, and keeping all stakeholder groups informed of activities and progress.

- Plans and decisions should be made based on their potential for improving outcomes

for all students, including those identified as "at risk."

- Plans and decisions should be made based on knowledge of validated schooling practices as identified in the educational research base.
- Plans and decisions should be data based; that is, based on information about current student performance and community priorities.
- The role of central office personnel is to inspire and provide support for school-based management.
- Proposed improvement activities have the best chance for success when staff engage in collegial planning and projects.
- Real and lasting change occurs slowly, and those engaged in a change process can expect to encounter obstacles along the road to achieving their goals.

THE FOCUS ON STUDENT SELF-CONCEPT

With assistance and support from NWREL staff, a broad base of district, school, and community representatives initiated a district-wide improvement effort in the manner specified by the CTF process. Guided by the district leadership team, this group developed a mission statement, a vision statement, and five student goal statements, with the development of positive student self-concept as the first priority goal.

Why self-concept? As planners utilized the CTF processes for identifying needs, determining their relative importance, and reviewing relevant research, they came to appreciate the critical role of positive self-concept in the school performance and overall well-being of students. In particular, they came to understand the close relationship between positive self-concept and academic achievement. They also became very concerned about the negative influences on self-concept experienced by many Stevenson-Carson students due to widespread economic hardship and its attendant family problems—drug/alcohol abuse, domestic violence, and depression.

Leadership team members and stakeholders developed and refined an action plan aimed at enhancing student self-concept. At the same time, they specified measurable academic, behavioral, and affective indicators of self-concept in order to be able to monitor progress toward the goal.

In keeping with the evidence that locally managed improvement efforts have the greatest likelihood of success, staff of each of the district's four schools were given the responsibility and the authority to develop their own plans and activities for improving the self-concepts of students within that school. Stakeholders did agree, however, that efforts to enhance self-concept should not take the form of separate programs. Rather, the use of research-based methods and techniques for building positive self-concepts should be integrated into all aspects of the school program.

Both the educational research base and the experience of Stevenson-Carson educators pointed to the critical importance of adequate information, support, and resources in order for improvement efforts to succeed. Consequently, district personnel worked to give the self-concept development effort high visibility throughout the district and made themselves available to provide training and technical assistance to staff of each school as they planned and launched their activities.

For their part, board members approved the provision of release time to assure that staff development and training activities could take place, established criteria for assessing the level of caring and empathy exhibited by teachers seeking employment within the district, and authorized grant moneys for implementing action plans.

Practice: Activities to Build Positive Student Self-Concept

Visiting classrooms, talking with teachers, and observing school activities in process provided a wealth of information about each school's approach to fostering positive self-regard in its students.

STEVENSON ELEMENTARY SCHOOL

Ms. Jodi Thompson, a fifth grade teacher at Stevenson Elementary School, opened her classroom for observation as she conducted a Student Circle activity. Students were given the opportunity to offer one another support or advice, and to express "resentments" or "appreciations" they might have on their minds.

First came a review of the school's guidelines for interpersonal interactions and other behaviors. In response to Ms. Thompson's queries about the guidelines, students enthusiastically raised their hands, were recognized, and identified the following:

- Striving for one's "personal best," explained by one student as, "not your neighbor's best, but your own"
- Avoiding "put-downs," including a short discussion of "how put-downs make people feel bad"
- Everyone's "right to pass"; that is, each person's freedom to "pass" on suggestions or invitations that he/she knows or suspects are harmful, such as using drugs
- Telling the truth
- Building trust for one another
- Engaging in "active listening," which students demonstrated by looking at each speaker and communicating attentiveness with their body language.

Ms. Thompson thanked each student as he or she shared, and then directed the class's attention to the classroom "put-up" box. The opposite of put-downs, put-ups are messages of thanks or appreciation that students had written to one another or to Ms. Thompson and placed in a box specified for that purpose. As the box was passed from student to student and the put-up messages were read, there was much laughter and good cheer. "How does it feel to be put-up this morning, guys?" asked Ms. Thompson, to which responses of "Good!" and "Great!" could be heard.

An additional noteworthy feature of this class is that special education students could not be distinguished from their classmates.

Ms. Annette Medlin and Ms. Sue Lofberg, Stevenson Elementary teachers who applied for and received Self-Concept Grants from the district, discussed their self-concept development activities.

One use to which the grant resources have been put is the development and implementation of Arts Afternoons, a program grounded in Dr. Howard Gardner's concept of multiple intelligences. Ms. Lofberg explained that program students, many of whom have been identified as being at risk of school failure, interact with teachers, classified staff, senior citizens, and area artists as they express themselves through a variety of artistic media. Both visual and performing arts are emphasized. "Our intent is to enhance self-esteem using artistic expression as our vehicle," reads the grant proposal, which also provides the research evidence (as required of grant applicants) showing that activities such as those proposed have led to increases in student self-esteem in other settings.

Arts Afternoons activities conclude with a "Show Off" of artistic products, in which students display or perform their work for school and community people. An impressive mural developed by Arts Afternoons participants decorates an expanse of wall in one of Stevenson's hallways.

Arts Afternoons is characterized by frequent evaluations, involving its student participants, of how the program is going—which activities have gone well, what needs to be changed, and solicitation of suggestions for ways the program might be improved. Student input is taken to heart and has been a major ingredient in shaping the program.

Ms. Annette Medlin's grant supported the development of Stevenson's "Record of Achievement" for students in grades K-3. In keeping with recent research favoring the use of performance-based assessment methods rather than relying on standardized testing, the Record of Achievement focuses on student demonstrations of skills they have acquired. A key element is an alternative report card which identifies the large array of learning areas and subskills presented to and acquired by children during their primary years. The card notes skills introduced and skills mastered, and includes indications of the student's

level of effort. Reviewing Record of Achievement reports with their child and his/her teacher, parents get a much more complete picture of the child's learning progress than that offered by more traditional report cards.

The Record of Achievement also includes samples of student work, many of which are selected for inclusion by the student. In addition to the periodic parent-teacher-student conferences, there are frequent conferences between teacher and student, in which student work samples are reviewed and, as the original grant proposal specifies, "a teacher must assess nonjudgmentally and gently and respectfully critique but not criticize." Having the opportunity to review his/her own cumulative record, says Ms. Medlin, "enhances self-concept by showing the student's growth and progress over time."

Another of Stevenson Elementary School's approaches to building student self-concept is through the KLUE (Kids Like Us are Everywhere) program, a 12-week class for children whose parents have drug or alcohol problems. Participants are self-selected initially and continue in the program if parent permission is granted. A tracking system is being used to determine whether involvement in the program reduces or delays the use of drugs and alcohol by participants.

CARSON ELEMENTARY SCHOOL

Carson Elementary principal Chris Whetzel speaks of the school's self-esteem-building activities with a great deal of pride. He described the Kids Care program, in which each classroom of students, together with their parents, teacher, and instructional assistants, participates in an array of self-esteem-building activities while on a day-long retreat at a Forest Service retreat center.

When a Carson student is selected as Citizen of the Week, Mr. Whetzel calls his or her parents and draws their attention to the positive things their child has done to receive this honor. And in Carson's VIP (Very Important Person) classroom activities, students have the opportunity—one at a time in each class—to select and portray pictures which reflect the things each child feels are important about him/herself—pictures of family activities, sports participation, and other elements of the child's life. Not far from a VIP Board in one second grade classroom, the following affirmation was displayed on the wall:

> I am the one and only me. I am an important person. I like myself. When I really like myself, others will like me, too. I am responsible for what I do and the kind of person I am. I am special.

As a complement to the many brief overviews of activities taking place at Carson, a visit with veteran sixth grade teacher Mary Frenter provided an in-depth look at the way self-esteem-building activities are integrated into the work of one teacher. Ms. Frenter made no secret of the fact that, at the beginning of the current school year, her class was "unruly" and fraught with social interaction problems. She also made it clear that this is no longer the case. Asked what she does to ameliorate a difficult situation like this, she launched into a description of the many activities she conducts to enhance students' self-regard and help them build skills in interacting positively with one another. These include:

- Explaining and reinforcing her classroom's guiding principles: "Integrity, Kindness, and Respect."
- Weekly "spotlighting" of a given student, during which the other students write and communicate positive things about the week's featured student.
- Teaching students the importance of "seeing the good in one another" and continuously encouraging them to do so.
- Frequently changing the seating arrangement in the classroom and having students observe and make positive observations about their new "neighbors."
- Participating with her class in the Kids Care program.
- Displaying a "Put-Up Board," on which the positive comments students write about one another are posted.
- Teaching the use of "snakes": When students hear comments that sound like

put-downs, they are encouraged to make a hissing sound and a "snake" gesture—holding one's hand with the index and middle fingers partially extended, as if they were the fangs of a snake. In this somewhat whimsical way, they can signal their unwillingness to listen to or participate in spiteful talk.

- Making use of a classroom "Me Board," which is similar to the VIP Board used in some others of Carson's classes, but somewhat more complex, befitting the greater maturity of these students. Me Board displays feature both pictures and words, with descriptions and images revealing the student's plans, hopes, and dreams, as well as their present circumstances. Each student presents his or her Me Board display to the whole class.

- Carrying out a practice whereby students who are disruptive must leave the room and are allowed to rejoin the class only after an analysis and improvement plan are made.

- Frequently focusing on helping students to see how their behavior impacts others.

- Having students "make appointments" with their parents to discuss things of importance to them.

- Encouraging parent participants in the school's open house to leave "warm fuzzies"—notes of praise and affection—in their children's desks.

- Working with parents in a program called "Preparing for the Drug-Free Years," in which parents learn how to deal constructively with their own emotions, solve problems, and develop greater understanding of young people through role-playing.

- Providing classroom activities to help students to manage their own anger and deal with the anger of others

- Teaching "politeness skills," for example, discussing the importance of both a person's words and tone of voice in conveying meaning. Students are encouraged to seek a "reality check" when they are unsure about what another person's tone of voice might mean.

- Recognizing that "we all feel sorry for ourselves sometimes" and permitting students to have "pity parties"—periods of self-indulgent sulking—for a maximum of 45 minutes.

- Teaching the importance of learning from failure. "I'm going to teach you how to fail," Ms. Frenter says, explaining that students, particularly those inclined to be perfectionists, need to learn that "the world doesn't end if you don't do everything perfectly."

- Making use of an array of activities from the resource book, *Go For It!*, which was developed with gifted children in mind, but which Ms. Frenter has found to be appropriate for all students.

- Focusing on elements from William Glasser's Reality Therapy, which identifies "love, power, fun, and freedom" as basic human needs. When students are having problems, Ms. Frenter works with them to analyze their experience in order to see which of these elements might be insufficient. Each student develops "My Basic Needs Circle," and this is used to help them create a better balance among their needs.

- Having students put items of their choice in a "time capsule," which she keeps and then shares with students when they become seniors in high school.

- Offering opportunities for students to earn recess time.

And more. Asked what designation she gives to this program of self-understanding and improved self-regard for students, Ms. Frenter says, "I don't know what to call it—health? science? social studies? I can't say; I just do it, and it works."

WIND RIVER MIDDLE SCHOOL

The district's seventh and eighth graders attend Wind River Middle School and, as part of the school's approach to developing student self-concept, spend 30 minutes each day in a program called Home Base. The purpose of Home Base is to make certain that every Wind River student has a personal and ongoing relationship with a school staff member.

Home Base groups are limited to 14 members, and attempts are made to group together students who are not already established friends. Time in Home Base is spent working on listening skills and other interpersonal skills, and students engage in short activities from the "Ropes" curriculum, which focuses on building trust, interdependency, and positive self-regard. Home Base teachers are alerted when their students are falling behind in their assignments and take action to assist and encourage them.

A different but complementary approach to developing students' self-esteem is the "cross-age coaching" program co-developed by Wind River physical education teacher Tracy Jennings and a teacher from Carson Elementary School next door. A course in which the two teachers were involved required that they design an innovative course. From their collaboration emerged a physical education course in which Wind River students develop and carry out lesson plans for teaching and coaching the younger Carson children in a variety of sports activities.

Outcomes of this activity have surpassed the teachers' hopes and expectations. Wind River students, particularly those who had a history of behavior problems, have experienced a great deal of success in developing leadership skills as they provide guidance and support to the younger children. Many have said that their teaching/coaching experience has made them more understanding about the discipline problems teachers face. For their part, the younger children respond well to taking direction from the older students and express feeling important and special because of the attention and help given them.

During the observation, groups of Wind River students could be seen playing with groups of Carson children in several different indoor and outdoor activities—golf, soccer, tennis, basketball, and volleyball. In the team sports, each team was made up of both older and younger students, with the older students being attentive to their younger classmates, coaching, encouraging, cheering successes, and providing reassurance following misplaced kicks or missed baskets.

STEVENSON HIGH SCHOOL

The action plan for enhancing the self-concepts of Stevenson High School students has components ranging from student recognition activities to counseling activities in a variety of areas to programs designed to build students' academic self-confidence and success. Developed in response to research findings on effective practices, examples of programs and activities include:

- A Student of the Month program, featuring public recognition at a school assembly and breakfast as the guest of the principal, Jim Saltness.
- An annual Evening of Excellence event, during which students exemplifying excellence in different areas are recognized.
- A program for identifying and planning support activities for students who are experiencing academic, behavioral, or attendance difficulties.
- Drug and alcohol aftercare for students requiring ongoing support after substance abuse treatment.
- A Peer Helpers program, which trains students in helping, communication, and problem-solving skills so as to be effective in assisting their schoolmates in need of support.
- A support group for parents focused on sharing problems and successes.
- Study skills development activities provided to help freshmen get off to a good start academically.
- Community volunteer tutors who make themselves available to assist students needing help with school work and provide other kinds of assistance to teachers and administrators.

An in-depth look at just one of Stevenson's programs was provided by Mr. Saltness and technology education/industrial arts teacher Bill LaCombe, who described the school's Summer Success Program.

Initiated during the summer just past, Summer Success is an eight-week program jointly financed by the school district and the Community Foundation of Southwest Washington. Participants include both successful and at-risk students, who are paid for their involvement in the all-day, five-days-a-week program activities. Two-thirds of the 19 summer 1992 participants were selected based on factors such as low socioeconomic status, parental unemployment, poor attendance, behavior problems, and academic difficulties. The other third—the "role model" students—were selected based on having a history of school success. Summer Success activities included:

- Morning "icebreaker" lessons, such as challenging students with puzzles or mysteries to be solved using inquiry skills.
- Mathematics and language assignments set in real contexts that are meaningful to students. One such activity called for students to work cooperatively to prepare a written proposal for paving the school parking lot, including the computations for materials needs and costs.
- Ropes program activities aimed at building trust; e.g., a group of students holding another student off the ground, passing the student safely from one point to another.
- Day Camp leadership functions, in which Summer Success participants planned, practiced, and carried out activities for 60 children in grades K-6.

How did it turn out? Mr. LaCombe notes that there was distance and some friction between the at-risk and the successful students at the beginning of the summer activity, and that a few of the at-risk students never really became fully engaged in the program. For the most part, however, the goal of building trust and bonds between members of the two groups was met, and the attendance of many of the at-risk students has improved following involvement in the program.

"When I first came to Stevenson," says Mr. LaCombe, "I thought it would be a short stop for me. Now, I don't see myself leaving here anytime soon. I'm proud to be a Bulldog. The staff work together like a family. In Summer Success I learned a lot about the hardships many students face. I have become more compassionate, and I make myself more available to my students. These 'at-risk' kids know a lot; they teach me things."

Outcomes

Although the focused efforts to raise the self-esteem of Stevenson-Carson students have been in operation only a short time, staff have a wealth of anecdotal information about the positive effects of these efforts. Teacher surveys, for example, point to improved self-regard among students and indicate that teacher-student bonds have been strengthened.

Perhaps more to the point, however, are the findings concerning the indicators specified at the beginning of the improvement effort. Some highlights:

- **Dropouts**. The 1986-90 dropout rate averaged 8.75 percent. The 1990-91 dropout figure was 5.7 percent.
- **Attendance**. From the 1989-90 to the 1990-91 school year, average attendance at the elementary level increased slightly, decreased slightly at the middle school level, and increased significantly at the senior high level.
- **Achievement**. Of the many positive achievement indicators tracked by Stevenson-Carson staff, some are particularly noteworthy, including a dramatic reduction in the class failure rate of middle school students and a significant increase in the standardized reading comprehension scores of senior high students.
- **Referrals**. From 1989-90 to 1990-91 there was a 19 percent decrease in the number of senior high students receiving referrals and a 33 percent decrease in the number of middle school students receiving referrals.
- **Student Perceptions.** Average responses of middle school students to questions about staff acceptance, caring, and support of them improved dramatically from the period 1987-90 to the 1990-91 school year.

As Stevenson-Carson district-level and school-level staff have written and implemented action plans in other goal areas—skill development, knowledge acquisition, motivation, and values—they have taken care to continue their focus on building student self-concept. Speaking of the key role of positive staff-student interactions in building self-esteem, superintendent Tony Feldhausen quotes a bit of proverbial wisdom: "Students don't care how much you know, until they know how much you care."

Contact Tony Feldhausen, Superintendent, Stevenson-Carson School District, P.O. Box 850, Stevenson, Washington 98648, 509/427-5674, for more information on the district's activities for improving student self-concept. For more information on the *Creating the Future* strategic improvement process, contact NWREL staff members, Robert E. Blum (503/275-9615) or Thomas A. Olson (503/275-9644).

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April 1993

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #26

Achieving Success in Mathematics Through Innovative Programming

Davis Elementary School
Portland, Oregon

Al Fitzpatrick

Research Findings

To meet the needs of both successful students and those at risk of academic failure, key elements of effective classroom and schoolwide practice need to be present. According to *Effective Schooling Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory, April 1990), these include:

At the **classroom** level:

1.2.1 Instructional Groups Formed in the Classroom Fit Students' Academic and Affective Needs

e. Small groups are used for instruction and practice in the use of higher-order thinking skills.

1.3.2 Instruction is Clear and Focused

f. Teachers use strategies to develop students' higher-level thinking skills.

1.4.1 There are High Expectations for Student Learning

a. Teachers set high standards for learning and let students know they are expected to meet with them. Standards are set so they are both challenging and attainable.

1.4.3 Personal Interactions Between Teachers and Students are Positive

a. Teachers pay attention to student interests, problems, and accomplishments in social interactions both in and out of the classroom.

1.6.1 Students at Risk of School Failure are Given the Extra Time and Help They Need to Succeed

e. Whenever possible, at-risk students are given additional learning time for priority objectives; this time is spent in interactive learning activities with teachers, aides, or peer tutors.

At the **school** level:

2.2.2 School Time is Used for Learning

e. During the school day, unassigned time and time spent on noninstructional activities are minimal.

2.6.1 Students at Risk of School Failure are Provided Programs to Help Them Succeed

a. The focus is on prevention of learning problems rather than remediation.

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School Improvement Program

2.7.1 Parents and Community Members are Invited to Become Involved

f. Special efforts are made to involve parents of disadvantaged students, who are often underrepresented among parents involved in the schools.

Situation

Reynolds School District. Seven thousand students attend the district's schools, which include one high school, two middle schools, and nine elementary schools. The district is directly adjacent to the city of Portland and blends into the nearby community of Gresham. It is a combination of urban, suburban and rural settings.

Davis Elementary School. Almost 400 students in grades K-5 attend Davis Elementary School. Over 60 percent of the students qualify for free or reduced-priced lunches, and the school has a mobility rate of approximately 30 percent. Davis's student population is 20 percent minority, with Hispanic students comprising the largest minority group. Many of the students live in apartment complexes, and many of these are government subsidized.

Context

Davis Elementary School staff have received training in the *Onward to Excellence* (OTE) school improvement process developed by the Northwest Regional Educational Laboratory. As called for by the OTE process, Davis staff reviewed previous and current test scores and identified mathematics as an area of concern. Specifically, they noted that in the fall of 1986, there had been more students who were below average in mathematics than were above average and, in 1987, Davis Elementary students had had a mean score in mathematics below both district and county averages.

In 1990, Davis Elementary was awarded a grant from the RJR Nabisco Foundation to implement an innovative program entitled "Recess Math."* Recess Math derives its name from the fact that instruction beyond that provided during regularly scheduled mathematics lessons takes place during students' free time, such as during recesses and before and after school. An additional component of Recess Math is a six-week summer program. The aim of the summer program is to provide opportunities for students to learn important math skills and concepts in ways that are enjoyable and rewarding.

A key element of Recess Math at Davis Elementary School is that students attend by choice. It is not offered as a remedial math program, nor is it a special program for accelerated or gifted students. Any student who wants to attend is welcome to participate. Classes are mixed with regard to age, grade and ability. Recess Math has served nearly ninety percent of the school's population. In addition, the Recess Math summer program also accepts students who will enter kindergarten in the fall or who have completed the fifth grade at Davis Elementary and will be attending middle school in the fall.

In addition to the grant from RJR Nabisco, local businesses, the Davis Parent-Teacher Group, and the school district have provided financial support for equipment and supplies for the program. Recess Math is staffed by both certified and classified staff members. Staff allocations have been adjusted periodically to keep the student-to-teacher ratio at or below fifteen to one.

Students who choose to participate in the program must complete an application and pledge to attend class for one "unit," or about twenty days. Seven units are scheduled during the school year. Students may enroll in one of the following classes: before school, after school, or at lunchtime. They may also choose to spend some of their recesses in the program during the time they are enrolled. Davis Elementary does not provide special transportation to attend Recess Math classes; students without access to transportation are placed in lunchtime classes. Classes vary in length from 30 to 60 minutes each day. In 1992, an additional component was added to the program to address the need for early intervention. All kindergarten students visit the lab one day each week as part of their regular curriculum.

The heart of the Recess Math curriculum centers around seven goals and standards set forth by the National Council of Teachers of Mathematics:

* Davis Elementary School teacher Kristi Fosback was one of the originators of the Recess Math program and contributed the information on program development.

- Students will learn to value mathematics.
- Students will become confident in their mathematics abilities.
- Students will become mathematical problem solvers.
- Students will learn to communicate mathematically.
- Students will learn to reason mathematically.
- Students will demonstrate a higher rate of learning mathematics than those who choose not to participate in Recess Math.
- Students will demonstrate a higher rate of learning mathematics than they did in previous years without Recess Math.

The environment of the Recess Math laboratory is nonthreatening and encourages risk taking. Math lessons are always varied so that students who attend additional units will not repeat the same activities. Activities are enjoyable, but they do necessitate that students use mathematical thinking in order to complete them. Math manipulatives are in abundant use, and students have access to computers and calculators. Students spend considerable time solving problems together in small and large groups. Participants are encouraged to communicate verbally with adults and peers.

Practice: Recess Math Through the School Day and Year

BEFORE SCHOOL

The regular school day at Davis Elementary begins at 9:15 a.m. As is typical, students began entering the math lab at 8:00 a.m. on the day of the observation. They had either walked to school or had been transported by a parent or other adult. A bank of computers is set up on one side of the classroom, and each student took a seat at one of the computers. A teaching assistant and a student volunteer from a nearby community college were available to help students select an appropriate program. Most students were able to operate the computer on their own, but individual assistance was provided for students who needed it. Most students selected a program that provided them practice with math computational skills.

After about 15 minutes, when most students had arrived, the students were instructed to turn off their computers, put away materials and assemble on the rug. Recess Math teacher Vicky Porter displayed some coins on the overhead projector and asked individual students to show different combinations of coins that equaled one dollar. After demonstrating success with this skill and some discussion about the value of each coin, Mrs. Porter explained the activity for the day. Students would be making name tags (this was the first day of a new unit). The tag itself was free, but items to decorate the name tag would need to be "purchased." Students were each given a plastic bag containing a variety of play coins.

Arranged throughout the room were stations that contained decorating items and the needed materials to affix items to the name tags. The price for each item was posted at each station. As this was a mixed-age grouping of students, prices varied according to grade levels. For example, all students needed string so the name tag could be worn around their necks. Primary students paid ten cents for a length of string, while intermediate students were required to pay a penny for each two inches of string. "Jewels" were available for twenty-four cents. Stickers cost primary students four cents, while intermediate students could by them "two for a nickel." Glitter, easily the most popular item, was thirty cents a scoop. Colored paper was available for five cents per color. Seashells were an expensive item, and most students chose not to purchase them. When purchasing items to adhere to their name tags, students were responsible for counting out the coins needed for the purchase and for determining how much change they were to receive back.

The direct application of previously learned mathematics skills was apparent, but the opportunity to practice social skills was a terrific bonus. Students were required to make decisions and choices and to interact with peers and adults. The students' pride in their ability to make these transactions was evident, and they were clearly enjoying themselves.

Upon completion of the activity, materials were neatly put away, name tags were depos-

ited into a box, and students were quietly excused to go to their classrooms for the beginning of the regular school day. As they walked out the door, each student was invited back for another activity during their morning recess. Most of them returned.

RECESS TIME

At most schools, students are provided choices at recess times: they may choose to go outside where additional choices can be made, for example, between kickball and hopscotch. Some schools also allow students the choice of going to the library. At Davis Elementary, students have an additional choice: they can go to the math lab. Computers are available for individual or paired skill reinforcement, and a variety of other math activities are always available.

KINDERGARTEN STUDENTS

At 10:00 a.m., seven kindergarten students entered the Recess Math lab. They assembled around tables where brightly colored pattern blocks were available. They were allowed to experiment and quickly developed repeat patterns of two—diamond, hexagon, diamond, hexagon. After patterns were checked by an adult, the children were given similar shapes cut from construction paper and glued their "recreated pattern" on strips of paper. At the end of the session, they left the lab with their pattern strips, enthused about returning to their regular classroom and telling their teacher what a hexagon is. They were to return to the lab the following week for another math activity.

Involving kindergarten students in the Recess Math lab is a new practice in the 1992-93 school year. It is part of their regular schedule, each child attending once a week in a small group of six or seven students. This component supports the concept of early intervention and provides young students with early introduction to key math concepts.

FAMILY MATH NIGHT

Twice each year Davis Elementary School opens its doors in the evening and invites all families to attend a "Family Math Night." Over half of the families attend these events, at which students have an opportunity to "show off" their math abilities. Families participate in a variety of hands-on math activities (e.g., estimating, graphing). The purpose of these activities is to inform parents about the Recess Math program.

SUMMER PROGRAM

Students at Davis Elementary can also choose to attend Recess Math classes during the summer months. Three two-week sessions are available, with most students attending the entire six weeks. Students come for either a morning or an afternoon session. Each session lasts for two hours. Both large- and small-group activities are provided. The areas of emphasis are similar to those of the regular program—application of mathematics skills, decision making, and developing an appreciation for mathematics. All activities are skill or concept oriented, with an additional emphasis on having fun.

A visitor to the Recess Math lab will observe students actively involved in mathematics practices appropriate to their ages and developmental levels. Activities are open-ended, encouraging the application of problem-solving and critical thinking skills. Students are allowed plenty of time to complete activities. Exploration is the norm; adults provide assistance when needed, but their approach is to use questioning strategies that will allow students to find their own answers.

Students exhibit high levels of interest. While student-student interaction takes place, children complete activities with purpose and task commitment. The climate of the classroom is relaxed and encouraging. Since program participation is optional, it is obvious that students attend Recess Math because it is fun for them.

Program Evaluation

The staff of Davis Elementary School, recognizing the need to evaluate and monitor the Recess Math program, developed an extensive system for assessing program success. They have now completed two annual evaluations. Highlights from among the findings include:

- Student attitude surveys show uniformly positive attitudes about their confidence with math, valuing of math, and communicating about math.
- Parent response to a questionnaire was overwhelming supportive.

- 100 percent of the staff indicated high satisfaction with the program.
- By the end of the 1991-92 school year, 89 percent of Davis students had participated in the program.
- Achievement test scores showed significantly higher gains than those for a comparison population.
- Thanks to the Recess Math summer program, Davis Elementary students exhibited mathematics growth during summer 1992, whereas the comparison population showed a slight loss of growth during this same period.

Those desiring more information about the Recess Math program are encouraged to contact former Davis Elementary principal, Dr. Donnise Brown, who is now principal of Margaret Scott Elementary School, 14700 N.E. Sacramento Street, Portland, Oregon 97230-3860, (503) 255-2031 or current Davis Elementary School principal, Curt Anderson, 19501 N.E. Davis Street, Portland, Oregon 97230-8035, (503) 665-6193.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #27

Success for At-Risk Students Through Computer-Assisted Instruction

Pensacola High School
Pensacola, Florida

Kathleen Cotton

Research Findings

Of the schooling practices that research has shown to be effective for educating students at risk of school failure, staff of Pensacola High School in Pensacola, Florida make use of many that are appropriate for students in grades 9-12. As expressed in *Effective Schooling Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory, April 1990), key practices include:

1.3.1 Students are Carefully Oriented to Lessons

c. The relationship of a current lesson to previous study is described. Students are reminded of key concepts or skills previously covered.

1.3.2 Instruction is Clear and Focused

d. Students have plenty of opportunity for guided and independent practice with new concepts and skills.

h. Computer-assisted instruction... supplements teacher-directed learning and is integrated with it, rather than supplanting teacher-led activities.

1.3.4 Students Routinely Receive Feedback and Reinforcement Regarding Their Learning Progress

f. When computer-assisted instruction is used, activities are chosen which give students immediate feedback regarding their learning performance.

1.3.5 Review and Reteaching are Carried Out as Necessary to Help All Students Master Learning Material

e. When selecting computer-assisted learning activities, teachers make certain these include review and reinforcement components.

1.4.3 Personal Interactions Between Teachers and Students Are Positive

b. Teachers praise and encourage student effort, focusing on the positive aspects of students' answers and products.

1.6.1 Students at Risk of School Failure are Given the Extra Time and Help They Need to Succeed

f. Teachers and aides communicate warmth and encouragement to at-risk

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students, comparing their learning with the students' own past performance rather than making comparisons with other students.

At the **school** level:

2.3.3 Staff Engage in Ongoing Professional Development and Collegial Learning Activities

h. Ongoing technical assistance is made available to staff as they pursue school improvement activities.

2.5.1 Learning Progress is Monitored Closely

c. Summaries of student performance are shared with all staff who they assist in developing action alternatives....

2.6.1 Students at Risk of School Failure are Provided Programs to Help Them Succeed

e. Programs and activities for at-risk students are carefully coordinated with regular classroom activities.

g. Remediation programs for older students incorporate validated approaches such as...computer-assisted instruction.

j. The findings from ongoing monitoring efforts are used to adapt instruction to students' individual needs.

Situation

At the extreme western end of the Florida "panhandle" is the Escambia County School District, which serves a student population of 42,000. Some nineteen hundred of these students attend Pensacola High School (PHS), a 9-12 school located in the city of Pensacola. African-American youth make up 45 percent of PHS's student population, white students comprise another 45 percent, and students from other racial or ethnic groups make up the remaining 10 percent.

The families of PHS students represent a wide economic range: although one-fourth of the school's students come from advantaged, well-to-do homes, fully half of them are from the other end of the socioeconomic spectrum and qualify for free and reduced-priced lunches. PHS staff describe the school as "three schools within a school," since it comprises the regular instructional program and a Dropout Prevention program, as well as being an International Baccalaureate magnet school.

Context

In 1985 Pensacola High School became a field test site for the Summer Youth Program operated by the local Private Industry Council with funds from the federal Job Training Partnership Act (JTPA). The summer program included a computer-assisted instruction (CAI) component, and the JTPA Title II funds supported the initial development of a CAI laboratory and program at PHS. Other high schools in the Escambia district were also involved in the program, which was coordinated by English teacher and CAI specialist Gene Evans.

In 1987, Pensacola assistant principal Sarah Armstrong served on a team of Escambia district educators working on a program proposal aimed at lowering the district's high dropout rate. With CAI facilities already in place, and with research findings supporting the use of CAI with dropout-prone students, Gene Evans encouraged the proposal developers to write a CAI component into the district's proposal. They did so, the proposal was approved, and since that time Pensacola's CAI lab has developed into a large-scale and critical component of the school's program for supporting students at risk of school failure. Supported by a combination of JTPA, dropout prevention, and special education resources, the CAI program serves more than a fourth of PHS's students. Participants engage in CAI activities during daily 20-minute sessions, accompanied by their teachers and the instructional assistant who serves as a the lab's proctor.

In its present form, the CAI program uses software developed by the Computer Curriculum Corporation (CCC) headquartered in Sunnyvale, California. The program's "host" computer is located at PHS, and other participating schools are connected to the system by modem. The host has a large capacity; it can accommodate 5,000 students, each working in five curricular areas.

CAI LEARNING ACTIVITIES

The CAT scores of participating students are used to determine the level at which each student begins in each of the learning areas addressed by the CCC software—reading, mathematics, language arts, spelling, and a pre-employment course in "survival skills." Regardless of initial achievement level, matching students with CAI activities that will allow them to have scores of 80 percent or above is a key feature of the program. For these at-risk students, achieving at or above the 80 percent level is sometimes their first experience of school success, and survey results indicate that their self-esteem is greatly enhanced as a result. Achieving 80 percent mastery also insures that students will be ready to take the next step in whatever learning sequence they are pursuing.

A Teacher Information packet highlights the individualization of instruction that the CAI program makes possible:

> The individualized program is provided as the computer monitors each student's progress and
>
> 1. diagnoses the student's level of understanding of a concept.
> 2. selects or generates exercises appropriate for each student.
> 3. analyzes all student responses.
> 4. gives appropriate confirmation, correction, error message, or hints.
> 5. displays the student's results at the end of a session.
> 6. records the student's performance daily.

More specifically, the CAI curriculum begins with what are known as Initial Placement Motion (IPM) algorithms, which are set so that each student will be able to produce at his/her actual grade level of achievement, regardless of test scores.

Let's say a student is working on mathematics skills. When the student generates an incorrect response on a problem involving the subtraction of fractions, the program makes note of this and presents a similar problem within the next six or eight problems it offers. If this second problem is also missed, the program continues to present, at frequent intervals, problems calling for skill in subtracting fractions. If five such problems are offered and missed, then only problems of this kind are presented until the student is able to produce correct responses to fourteen of them in a row. Then, this type of problem is again interspersed with other kinds of math problems until 17 subtracting-fractions problems in a row are answered correctly. This is considered mastery of the subskill of subtracting fractions.

The program, however, "remembers" that this student had previously experienced difficulty with problems involving the subtraction of fractions. At the end of the next twenty 20-minute sessions, another subtracting-fractions problem is presented to determine whether the student remembers. If the student misses this problem, the cycle begins again.

Similar cycles are carried out within all curricular and skill areas, and students rarely require more than two of these cycles before they are able to retain their skills in the area under consideration.

Mr. Evans provided general information on the program's many elements. The reading component, for example, has learning activities ranging from the kindergarten to the adult levels. Among its many skill areas is "Critical Reading Skills," in which students read a passage, with a time setting that prevents them from referring back to the passage when it is time to respond to questions about it. Mr. Evans notes that once students become accustomed to this pacing, their comprehension scores begin to improve rapidly.

Within the Language Arts component, the audio feature of the program "speaks" words that students are to spell, and students type the words in response. The word processing part of the component leads students through constructing sentences, then paragraphs, then types of written products, such as "how to" instructions and descriptions of persons, places, or things.

The Mathematics component contains a huge volume of material—enough for five years' worth of sessions at the usual student rate of five 20-minute sessions per week. Skill areas

include problem solving, math concepts, and math survival skills, which focuses on real-life applications of mathematics knowledge.

RECORD KEEPING

Highlights from among the many kinds of reports the software is able to generate include:

- **Classes.** Each participating student is coded by grade, class, and whether he/she is a JTPA student, a dropout prevention student, a special education student, and so forth. This makes it possible to generate many different kinds of student lists for different purposes.

- **Individual.** Reports on individual students indicate areas of emphasis, level of participation, modifications to programs (e.g., turning off the "timing" function for special education students, who are generally allowed to take all the time they want to respond to learning activities).

- **Enrollment.** Mr. Evans has cross-referenced CAI activities with district performance standards, making it possible to identify and prescribe activities in support of required student performance levels.

- **List.** The record keeping system can generate lists of CAI participants by class and grade level, what CAI activities these students are currently pursuing, what they have completed, and so on.

- **Course Report.** This is a record of each participant by curricular area, grade level, problems attempted, number correct, percent correct, identification of learning problems, likelihood that a given student will be presented with a certain kind of problem, etc. Teachers receive Course Reports every Friday.

- **Gains.** This report indicates the number of sessions in which a student has participated, the amount of time he or she has spent on the computer since completion of the Initial Placement Motion, the gain (expressed in months), and the grade level at which the student is working.

- **Worksheet.** Teachers can ask for individualized worksheets to be generated for their students, based on each student's learning history and needs, poorest performance area, and other factors. Teachers can specify whether or not the worksheets will include answers.

The system is also able to identify which students throughout the district are at the computer terminal at any given moment, specify the last time a given student attended a CAI session, and carry out other functions.

THE ROLE OF TEACHERS

Mr. Evans emphasizes that the impressive technology should not obscure the fact that the heart of the CAI program is the teacher-student interactions that take place in relation to the computer activities. First of all, teachers receive training and acquire experience pursuing the CAI activities before their students do, which enhances their ability to assist when students have difficulties. Teachers always accompany their students to the CAI lab, taking note of their students' daily progress and calling students' attention to ways in which their performance is improving.

The weekly reports on student performance that teachers receive enable them to tailor learning activities to address areas of need, while praising and rewarding success. Teachers can also utilize the lab facilities for specific, short-term purposes, such as having students write papers using the lab's word processing capabilities or exposing them to review material in preparation for upcoming tests.

An excerpt from the program's Computer Assisted Instruction Philosophy states:

> The program recognizes that the classroom teachers are the most important element in computer assisted instruction. Properly trained teachers who have control over the CAI program can provide their students with an added dimension in learning. In the end, it is the classroom teachers' creativity, enthusiasm, the professional competence that will transform instruction into exemplary student achievement.

Practice: Highlights from a Day in Pensacola High School's Computer Lab

Ms. Sandra Robinson's class entered the large, bright CAI lab and immediately occupied most of the lab's 24 workstations. Obviously familiar with lab routines, each student entered his or her identification number into the computer, which responded by presenting predetermined activities selected on the basis of that student's learning needs. While the students were working, Ms. Robinson pointed out that since no two students have the same learning strengths and needs, different questions are presented to each individual, making "cheating" irrelevant and impossible.

Ms. Robinson described her methods for enhancing student motivation in the CAI lab. Each time a student gets a score of 100 during a session, that student is recognized by having his or her name displayed as a member of the "Top 100 Club." Ms. Robinson also factors in students' weekly CAI lab reports and worksheet grades as one-fourth of their overall grade during each six-week period. "I do it this way so they will know that computer lab activities are important, not just 'busywork'," she says. Later in the day, another of Ms. Robinson's classes made use of the lab, again in an efficient, businesslike way.

Throughout the day, Ms. Ann Stanley, the instructional assistant who is the CAI lab proctor, worked with each group of students, answering questions and providing assistance as needed. Like other PHS staff members who have experience with the lab, Ms. Stanley believes that it is the experience of academic success that inspires students to apply themselves in pursuing CAI activities. "I like to see kids succeed," she says, "and most of them do in here." She believes that students' feelings about themselves improve because of increases in content knowledge, but also because they are developing computer skills. Students conducted themselves in a focused and orderly manner as groups rotated in and out of the lab at 20-minute intervals as the school day went by.

Mathematics teacher Mr. Jack Moberly works both with PHS students and at Tate High School with adults preparing for their high school equivalency certificates. Asked about the difference between these two groups, Mr. Moberly noted that they're similar in most ways, but that adults have appreciably longer attention spans, and thus can work productively for longer periods of time than the 20-minute intervals appropriate for younger students.

Of the kinds of information that CAI record keeping system provides, Mr. Moberly is most concerned with data on individual student progress. "Teachers aren't as interested in identifying the grade level on which a student is working as they are in seeing whether a student is experiencing learning gains, and if so, how much. This system keeps us abreast of that."

When a group of Ms. Katherine Frazier's English-as-a-Second-Language students were settled in at their workstations and tackling the day's activities, she described the value of CAI lab activities for ESL instruction. She remarked that her students function on many different levels—from totally non-English speaking to fairly proficient in English skills. Consequently, the CAI program, with its ability to tailor and individualize instruction, can offer each student lesson content on his or her own level.

Although the program has activities in seven different languages, it does not include Vietnamese, which is the native language of most of PHS's ESL students. Consequently, these students engage in reading activities in English, beginning at very simple levels and gradually building English skills.

Outcomes

The Escambia School District's dropout prevention program received recognition from the State of Florida as an exemplary program for the 1991-92 school year, with the CAI component cited as a major reason for the program's success. A close relationship between time spent on CAI lab activities and NCE gains on the reading and math portions of the CAT was noted for all four of the district's high schools.

Focusing in Pensacola High School's program in particular, Gene Evans notes that 30 percent of PHS's 1992 graduates were graduates of the CAI lab. Data on students with

comparable academic histories and no CAI lab experience indicate that half the students comprising that 30 percent would not have graduated without the lab experience. This conclusion is also supported by data on PHS students before the inception of the program. During the years that the CAI program has been in operation, the dropout rate for all CAI participants has not exceeded five percent, and the dropout rate for the JTPA students—who are most at risk—has remained below two percent.

A study of the use of the CAI lab by special education students found that these students have experienced an even larger gain per hour of CAI activity than have the regular program students. They enter at a much lower level, of course, but the study found that these students—educable mentally retarded, physically impaired, speech and hearing impaired, educationally handicapped, specific learning disabled, and severely emotionally disturbed—have exhibited as much as a month of educational growth for each hour of CAI instruction. Specifically, their gains were somewhat greater than those of regular program students in the Initial Reading strand, equal to the regular program students in Readers Workshop activities, and significantly higher than regular program students in Math Concepts and Skills.

Is there a "down side" to this highly successful program? Gene Evans believes that the program could produce even greater achievement gains if computer equipment were more modern, if acquisition of equipment were not completely dependent on grant moneys, and if there were a budget for maintenance and repair. He wishes there were resources to open up the CAI lab's offerings to at least some of the non-at-risk population. And he also states that the program has received insufficient support and attention from the outgoing district administration.

On the plus side, Mr. Evans cites the openness and support of PHS principal J. P. Cone among the reasons for the program's success. In addition, Mr. Evans is hopeful that the incoming district superintendent will provide greater support for the CAI effort.

Since only low achievers are scheduled into the program at the present time, what about the potential for program students being stigmatized? Mr. Evans notes that this potential exists, but is minimized due to the use of the lab for word processing by non-program students when program students are not making use of it. In addition, adult participants in Community Education classes use the lab in the evenings.

For more information about the CAI program—at Pensacola High School in particular or throughout the Escambia district—contact Mr. Gene Evans, CAI Program Specialist, Pensacola High School, A and Maxwell Streets, Pensacola, Florida 32501, (904) 433-8291.

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SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #28

Restructuring in a Multiethnic Environment

Linda Vista Elementary School
San Diego, California

Barbara K. Hernandez

Research Findings

Researchers have conducted extensive examinations of effective practices for urban schools serving minority student populations. In addition to the practices from the effective schooling research in general, they also have identified practices that have special relevance to minority racial and ethnic groups.

Having a principal who "brings in the research" may help explain the strong connection between what is happening at Linda Vista, a large urban elementary school in San Diego, California, and what the effective schooling research recommends. The following practices, drawn from NWREL's *Effective Schooling Practices: A Research Synthesis / 1990 Update*, are among those that have generally guided Linda Vista's five-year restructuring effort:

2.2.1 Students are Grouped to Promote Effective Instruction

2.3.1 Strong Leadership Guides the Instructional Program

2.3.2 Administrators and Teachers Continually Strive to Improve Instructional Effectiveness

2.7.1 Parents and Community Members are Invited to Become Involved.

In addition, in her paper, *Educating Urban Minority Youth: Research on Effective Practices* (Topical Synthesis #4, NWREL 1991), Kathleen Cotton identifies effective practices with "particular relevance to members of minority racial and ethnic groups." Those influencing Linda Vista's program include:

1. **Teacher responsibility and sense of efficacy** that acknowledges that learning problems are not caused by students' backgrounds but indicate a need to adapt one's instructional approach
2. **Degree of native language instruction** provided based on skill levels of students
3. **Division of large schools into smaller learning units** to foster ongoing relationships between students and school personnel
4. **Assessment** that is nonbiased and genuinely reflects students' abilities
5. **Early childhood programming** to increase student achievement, improve attitudes toward schooling, and increase graduation rates

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6. **Multicultural programming** integrated into the core curriculum to promote cross-cultural understanding and respect

7. **Strong parent involvement** in classroom and extracurricular activities

8. **Coordination of community resources** to meet personal or family needs of students.

Situation

Linda Vista Elementary School is a large urban school within the City of San Diego School District. Its students come from low socioeconomic backgrounds and neighborhoods where gang activity is common. Nevertheless, the school is virtually free of gang activity and gang graffiti. The school and surrounding grounds are clean and well kept. Students make orderly exchanges between classes and engage in friendly interactions on the playground.

Comprising two campuses, Linda Vista Elementary School has a student enrollment of nearly 1,000 students (in late 1992 enrollment stood at 995) and a staff of 120. There are 42 certificated staff, and every teacher has an aide supported by federal funds.

The neighborhood has always been multiethnic; however, about a decade ago, it became even more so. The surrounding naval housing became low-rent housing for Southeast Asian families. Three Southeast Asian refugee groups—Hmong, Laotians and Vietnamese—account for 55 percent of the school's student enrollment. Hispanics and blacks constitute 33 percent, and whites, 12 percent. Five major languages are spoken at Linda Vista: Hmong, Laotian, Vietnamese, Spanish, and English. Seventy-five percent of the student body is limited English proficient (LEP). This is up from 50 percent in the late 1980s.

Context

Dr. Adel Nadeau was appointed principal at Linda Vista in July 1987. She came to the school with a background in English as a Second Language, bilingual education, teaching, and administration. She found a school with, as she says, "immense needs." Students received inequitable services; staff suffered from lack of communication and low morale; instruction lacked continuity and focus. Dr. Nadeau did her homework. For six months she gathered evidence. She documented discouraging student achievement data. She also found that excessive pull-out practices for non-English-speaking or limited-English-speaking students resulted in:

- Students missing entire blocks of instruction in art, music, or computers
- Teachers never having full classrooms
- Teachers receiving unequal preparation periods.

These inequities contributed to the low staff morale she witnessed daily.

Knowing change was desperately needed, she called a meeting in January 1988 of all staff, both certificated and classified. She presented the facts and said, "The decision to change is not yours. But *how* we change *is* your decision." Thus began a site-managed restructuring effort which has spanned five years at the time of this writing and still continues.

From January 1988 until the following June, staff met and considered how they wanted to change Linda Vista. Dr. Nadeau had asked them, "If you had a magic wand, what would you do to improve Linda Vista?" They waved their magic wands and came up with seven goals to guide their work:

1. More appropriate instructional/language proficiency groupings for each student
2. Less pull-out instruction during morning hours
3. More integrated learning experiences
4. Greater equity of services to all students
5. Less labeling of special needs students
6. A more unified staff
7. Better use of space.

Staff formulated a total school restructuring effort, simply called *The Plan*, based on these seven goals. They initiated and have continued a site-based management system orga-

nized around a committee structure and full-staff consensus decision-making. "Committee membership is rotated continually to encourage participation and leadership from the entire staff," says Dr. Nadeau. "This structure increases staff ownership in the process and its results."

Staff may sit on one or more of 19 standing committees. A sample of these includes: Assessment, Budget, Calendar, Curriculum, Discipline, Early Childhood, Parent Outreach, and Race/Human Relations.

The major components of the Plan are:

- An upgraded curriculum
- Development of an early childhood education program for pre-kindergarten, kindergarten and special education students at the annex site
- Reduction of class sizes
- Provision of weekly preparation time for all teachers
- Reallocation of resources to implement the Plan.

Resource teacher Cindy Whitmore describes the process in this way:

> We are more involved in decision making now, and we really work together. There's a lot more sharing among staff. But we needed our administrator to give us a "jump start." Without her, none of this would have happened.

In addition to providing the impetus for change, Dr. Nadeau has served as a link with district staff when questions have arisen about district rules or legal issues related to implementation.

Sally Greenfeld, also a resource teacher, adds:

> "Jump" is a good word to use. We had to jump in and do a complete revamping of the system. One small change each year wouldn't have been enough. You can't wait until the time is perfect or conditions just right. We did the big things first and refined later.

Whitmore adds, "It's like a spider web. But it all works. It wouldn't work at all if we didn't have very dedicated classified employees. They are an important part of our success."

A supportive leader and empowered staff have changed the quality of education at Linda Vista.

Practices

"We did the big things first and refined later." Because Linda Vista is involved in a comprehensive school restructuring effort, it is most helpful to look at several practices to see how the overall plan is being implemented.

Adapting Instructional Approach and Groupings to Serve All Students Equitably

Linda Vista has gone from excessive reliance on pull-out programs and age and ability groupings to ungraded classrooms within approximately four multi-age groupings—early childhood, primary, middle, and upper. The Annex, Linda Vista's auxiliary campus, houses its early childhood education program, including pre-kindergarten, kindergarten, first grade developmentally young, and young-age special needs students. Previously, special education students were segregated at the annex. At the main campus, students are grouped by primary (previously first and second grades); middle (previously third and fourth grades); and upper (previously fifth and sixth grades). Students are no longer referred to by grade levels, except for testing purposes.

Students are assigned to morning homeroom classes by their language proficiency levels to eliminate the need for pull-out programs. Proficiency levels include: entry-level, sheltered A and B (requiring a specialized English instruction program); transition A and B, nonsheltered classes, and bilingual classes. Each level has entry and exit criteria, and students advance when they meet the exit criteria, not at predetermined times during the school year. This morning schedule provides students with ample opportunity to foster close relationships with their homeroom teachers.

There is no "watered down" curriculum at Linda Vista. Students receive the same

curriculum, whether it is presented in their native language or in English. Social studies and mathematics are presented in a student's native language for Southeast Asian students. Spanish-speaking students are taught reading and math in their native language.

In the afternoon, students are rotated through a series of classes based on multi-age groupings only, not on language proficiency levels. Integrated by cultural and linguistic group and gender, students spend approximately ten days in two subjects. For example, a student will receive science and music for ten days and then rotate to physical education and art. In addition to science, physical education, and fine arts, all primary students take reading lab, oral language lab, literature, and computer lab. Upper students take literature, library research skills, math lab, counseling groups, and computer/writing. These classes are presented as subjects, not as supplemental or remedial programs.

This integrated afternoon schedule enables students to receive instruction from many staff in a variety of subjects that one teacher could not even begin to present adequately. They also are exposed to a variety of teaching styles. The afternoon schedule reduces boredom both for students and teachers and discourages alienation or isolation by making it possible for students to interact meaningfully with nearly all staff members.

Staff have spent several years developing their *Language Arts Standards and Rubrics*. This document clearly defines oral language, reading and writing competencies, instructional materials to use, and appropriate portfolio contents for each language proficiency level at each age grouping.

Dr. Nadeau says, "Acceptance of portfolios as a major portion of assessment at Linda Vista reflects a major change in teachers' thinking not only about assessment of student progress but also about learning." A radical change in the manner of grouping students to increase their learning inevitably led to a nontraditional approach to assessing their learning.

Assessment was a key concern from the beginning of the restructuring effort. Staff wanted to establish an assessment system that reflected both the state framework for assessment and Linda Vista's six levels of language proficiency. They envisioned a system that didn't unduly categorize students at the same time that it embraced schoolwide standards.

After much study, staff concluded that portfolio assessment would be used to assess the actual work of students—the process and thinking skills used—in the context of the standardized expectations set by instructional staff. In deciding to use portfolio assessment for language arts, staff had to design rubrics for oral language, reading and writing, and then decide appropriate types of student work to include in a portfolio.

Initial efforts at portfolio assessment were fragmented. Some teachers began building portfolios for their students while others stayed with old familiar ways. Then, in April 1992, Linda Vista received a large grant from RJR Nabisco under the Next Century Schools project. Funds from this grant enabled staff to incorporate technology into the portfolio assessment system and elevate it to a schoolwide effort. Special rooms housing teacher computer stations and electronic scanners are located at both campuses. Ongoing staff training ensures the effective use of the system, which can store all types of student work—oral, graphic, and written. Original work can be scanned directly from a photograph or lifted from a videotape or audiotape.

Designing and implementing the program has taken three years. Portfolios will be presented to parents for the first time during the 1992-93 school year.

Multicultural Programming

At Linda Vista, multicultural programming is used to promote cross-cultural understanding and respect. Curriculum units as well as special events are used to present information about culture in general and about particular cultures. Two major activities of the multicultural program are described below.

THEMATIC PRESENTATIONS

Every four to six weeks begins a new multicultural theme at Linda Vista. Students from early childhood to upper groups study different cultural groups, both within and outside the United States. Units present different aspects of the cultural group in both a historical and

contemporary context and rely on classroom visitors to serve as role models.

Culminating activities occur throughout the year. For example, American Indian Day occurs in November at the early childhood annex. This year students rotated through stations on the playground as the temperature reached a warm 75 degrees. One group learned a circle dance, listening intently to the beat of the drums. Another group planted corn, not in a garden but in dampened cotton balls placed in ziploc bags. The next group crushed corn kernels with small rocks on the asphalt to make corn flour, then moved to the next station where the corn flour was made into tortillas and fried. The last group rinsed cranberries in large wash tubs, then sat down to enjoy some cooked cranberries with biscuits.

Some students wore costumes made in class—vests from brown paper bags, decorated with brightly colored paints and beads, and paper headbands, also beaded and adorned with paper feathers. A visiting kindergarten class from a suburban school dressed as pilgrims and joined in the celebration. Teachers, aides and older students guided the children through the different stations. Several helped disabled students participate in the activities.

Teachers and paraprofessionals brought American Indian artifacts from their personal collections and transformed an ordinary classroom into a small museum, featuring pottery, basketry, and clothing. A special addition is a headdress made from golden eagle feathers. Because it is now illegal to obtain or own such feathers, the headdress is registered with the United States government. Children may also participate in hands-on activities in the little museum, including a shell game and clay making.

RITES OF CHALLENGE PROGRAM

Seeking answers to the problems plaguing African-American men, Ron Mtume developed an in-school program called Rites of Challenge for young African-American students. This eight-week course began in January 1992 at Linda Vista and is part of the morning social studies program for seven- to twelve-year-olds. The basic assumption of the course is that children develop, mature, and accept increasingly more socially acceptable responsibilities as they are empowered by adults to do so. The curriculum takes students through a series of challenges, including communication with family members, withstanding negative peer pressures, and personal decision-making. It also teaches African and African-American history and cultures. Parent involvement is a major aspect of the program.

Plans are underway to provide a similar program for Hispanic girls, who constitute the largest number of dropouts at Linda Vista. Eventually, staff plan to include all children in such programs.

Community Involvement

Community involvement is a strong focus at Linda Vista. A multi-faceted partnership program has grown from the school's commitment to involve its community in the educational process. According to Dr. Nadeau, "Partnerships are a major aspect of our restructuring effort." At present, Linda Vista enjoys partnerships with six agencies:

- Western Division of the San Diego Police Department
- County Office of Education
- Francis Parker Middle and Upper School (a nearby private school)
- Local YMCA
- Local McDonald's restaurants
- Price Club.

Partners provide many valuable services at Linda Vista. For example, the Price Club, a major corporation in California, provided funds for Linda Vista's one-acre garden, including seed, fertilizer, equipment, and fencing. Students care for the garden as part of their science classwork. Parents, especially the Hmong and Laotian, also use the garden.

In 1991, the YMCA approached Linda Vista staff. The YMCA has a large facility virtually unused during the day. It proposed that Linda Vista use the facility and even offered the help of their instructors. One glitch was transportation. A local McDonald's heard of the plan and decided they could help with transporta-

tion. They wrote a grant to McDonald's Corporation to fund some buses. Bus drivers from Francis Parker School drive the buses. Four days a week, physical education classes from Linda Vista are bused to the YMCA, where they participate in gymnastics, swimming, and soccer classes. Those with limited-English proficiency catch on by example. During its first year, YMCA officials estimate that nearly 20,000 free lessons will be provided.

Each year Linda Vista holds a partnership kick-off event to highlight that year's agencies and businesses that sign partnership agreements. This year the kick-off was held at the Annex. Approximately 100 young children gathered on the school lawn to witness the signing of the agreements. From this group, several students emerged carrying baskets of fruit, a gift for their partners symbolizing the "good things we give each other."

Parent Outreach

The Parent Outreach Committee is very busy at Linda Vista, because members know that parent involvement is key to the success of its restructuring effort. Parents must take pride in the school and support its efforts. Staff at Linda Vista are busy grant writers. This is how they obtained funds to hire a parent to serve as the parent volunteer coordinator. The coordinator prepares a newsletter for parents, recruits tutors and room parents, and carries out a myriad of other tasks.

One major responsibility is overseeing parent education workshops held five times during the school year. These workshops are based on needs assessments conducted with parents. Each workshop is conducted simultaneously in separate rooms in five languages. This involves writing a script for the workshop and translating it into five languages. Parents from each group then join together for refreshments after the session. Child care is provided.

Also supported by grant money, three community aides serve as liaisons to the parent community and as vital links to social service agencies. They also conduct monthly home visits to parents. Community aides do whatever is necessary to help families support their children in school. This may mean helping a family obtain a refrigerator for their home or shoes for one of their children. It may mean taking an ill child home.

As mentioned earlier, parents also are involved in the garden project at the school and the Rites of Challenge program.

Outcomes

Reporting in April 1991 on the visible effects of the restructuring process, Dr. Nadeau presented the following observations and data.

Site-Based Management Process

A system of staff committees has evolved from the initial restructuring effort. Both certificated and classified staff serve on committees which submit proposals in writing to the entire staff for their approval. A three-year committee effort has resulted in portfolio assessment being implemented at Linda Vista. The assessment committee worked directly with the Research and Evaluation district staff on an ongoing basis to make this possible.

Instructional Program Observations

The morning basic skills program runs very smoothly. An indication of its success is that an average of 25 students advance through the different language proficiency levels within the first quarter of the school year, and several hundred students are reprogrammed by the end of the school year. In 1991, a preliminary analysis showed that nearly 95 percent of the language proficiency groups met the English-as-a-Second-Language and reading-level expectations set by staff.

An upgraded curriculum, reduced class size, and increased teacher preparation time have led to improvements in several areas, such as time-on-task, student attendance, and staff morale. Linda Vista has maintained its record of having one of the lowest, nonapportioned absence rates in its district.

Programs that have been especially successful include a bilingual program for non-English-speaking students and the special education/basic skills program. To improve its image, the latter was given the name "The Academic Enhancement Program." Staff have observed genuine academic improvement for several

chronically underachieving students. Many students who have never received an award received the good citizen and academic improvement awards.

Two other new programs directly resulting from restructuring efforts are the gifted (GATE) program, which had not existed previously, and an innovative math program in which each classroom is a concept station and students rotate to each class every three weeks.

The afternoon program has retained student interest and enthusiasm. Visitors often remark how little dead time and off-task behavior they witness at the end of the day.

Instructional Program Achievement Data

In comparing the ASAT scores for spring 1991 and 1992, staff have found some significant differences for reading, math and language arts at all grade levels. (Grade levels are used solely for the purpose of data reporting.) For example, first grade reading scores went from 18 (mean percentile ranking) in 1991 to 59 in 1992; math scores, from 36 in 1991 to 76 in 1992; language arts total scores from 36 in 1991 to 73 in 1992.

Other grades didn't see such dramatic changes but still improved their scores: second graders moved from 47 in math in 1991 to 50 in 1992; third graders moved from 55 in math in 1991 to 58 in 1992; fourth graders moved from 15 in reading in 1991 to 27 in 1992, and from 24 in language arts in 1991 to 32 in 1992; and fifth graders moved from 28 in reading in 1991 to 32 in 1992.

English language test results for students served by Chapter 1 or state compensatory education programs also showed significant gains in 1992. For example, second graders scored 21.8 (percentile equivalent) on the reading comprehension pretest, but 53.2 on the posttest; third graders, 24.2 on the pretest, but 33.7 on the posttest; and sixth graders, 33.0 on the pretest, but 35.8 on the posttest. Again, larger gains were seen at the primary level.

Although not all scores showed gains, students are achieving at a higher level overall than they were before restructuring began.

Recognition/Awards

Certainly one indication of success is the recognition given one's efforts. At Linda Vista, recognition has been overwhelming. For example, Linda Vista received one of 15 Next Century Schools grants awarded nationwide by the RJR Nabisco Foundation. It has received state and national attention. One recent distinguished visitor was the Governor of California. Visitors are now a common sight at Linda Vista, and many have gained valuable information to help them with their restructuring efforts. The school was selected as one of nine exemplary sites to be included in a nationwide study of LEP programs. Finally, it was also featured in the April 1990 issue of *Time Magazine*.

A visitor once referred to Linda Vista as a "school made in heaven." Staff appreciate this praise, but they know their successes are the result of a lot of hard work and planning by everyone involved: principal, teachers, paraprofessionals, and classified staff. As physical educator Susana Occhi frankly admits:

> We have a different kind of stress now, actually a good kind of stress, because we are more involved and responsible. Before, someone told us what to do. Now, we are part of the decision making. We have to justify and define our programs to the entire staff. Before, we would just say, "that doesn't concern me." Now, everything concerns everyone. We look at the benefit to the whole school, not just one person. And we know we can always change what we don't like or what doesn't work. Yes, there are more after-school meetings, and change causes some turmoil. But, it's definitely worth it.

For more information about restructuring at Linda Vista Elementary School, please contact Dr. Adel Nadeau, Principal, 2772 Ulric Street, San Diego, California, 92111, (619) 496-8196.

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